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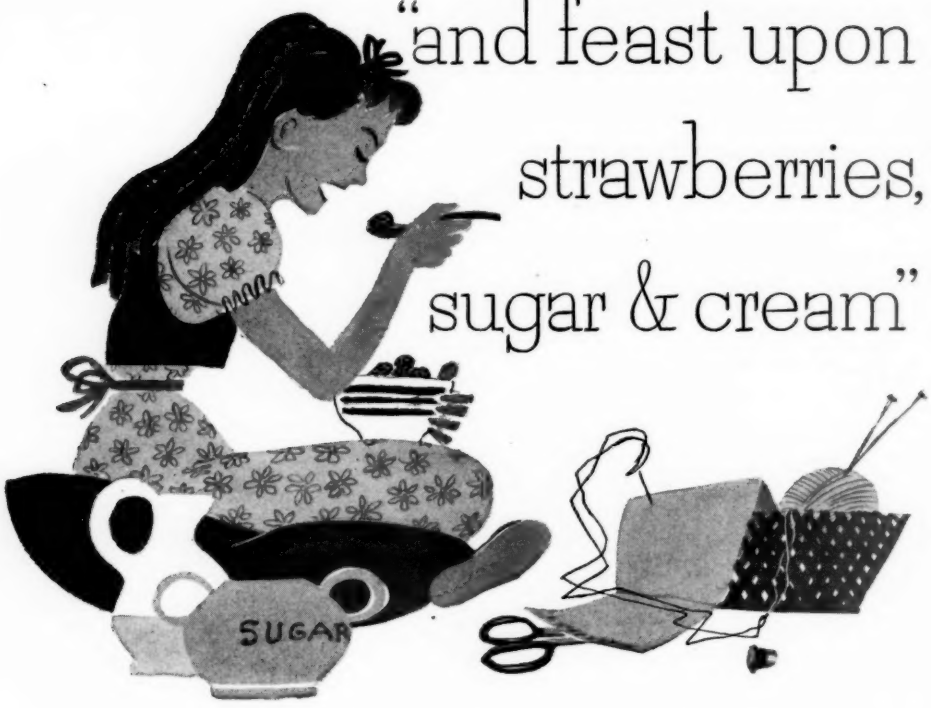


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# The Strang Cancer Prevention Clinics

Elise S. L'Esperance, M.D., *Director*

A SYMPOSIUM

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## INTRODUCTION

A DECADE seems the logical time to view in retrospect the development of periodic cancer health examinations as inaugurated in the Kate Depew Strang Cancer Prevention Clinics at The New York Infirmary in 1937 and Memorial Hospital in 1940, to bring more clearly into focus the aims of these Clinics and emphasize what they have so far accomplished.

During this period various changes of policy were necessary, for it was an untried field and we were largely dependent on the trial and error method, but always keeping in mind the important objective to be attained: the prevention and early diagnosis of cancer through education.

The first step was to persuade the public of the value of periodic cancer health examinations as the best means of controlling cancer. This has been accomplished as is shown by the growth of these Clinics. At The New York Infirmary, during the first year there were 71 applications. In 1946, 1356 new patients were examined and 3016 made return visits. The first year at Memorial Hospital, 150 new patients were registered; in 1946 there were 3925 new patients admitted in the women's division and 1778 in the men's department. This makes a total of 5,713 new patients examined during the year. The return visits at Memorial Hospital amounted to 8,740, a total of 14,453 examinations made in one year. These figures are the best evidence of the co-operation of the public.

The next important difficulty to be overcome was to convince the medical profession that such a procedure could be made a practical part of preventive medicine and might do much to lessen the mortality from cancer. For, if cancer is to be diagnosed early enough to offer a reasonable percentage of cures, the physician must be prepared to recognize its earliest manifestations. This can only be done by giving apparently healthy persons a complete physical examination.

It followed logically that if we were to attempt to diagnose cancer in its earliest stages, a definite plan of examination must be established. From the very first, we have concentrated all our efforts toward the most complete physical examination that can be made in a clinic, with enough elasticity to be expanded to include newer methods as they arise.

The physical examination as performed in the Strang Prevention Clinics is not limited to any part of the body but includes a complete survey of the skin surfaces, nasal and oral cavities, eyes, ears, blood pressure, height and weight. The chest is examined by percussion, ausculation and photo-roentgenographic or fluroscopic methods. Palpation of the abdomen is followed by a pelvic examination which includes a vaginal and cervical Papanicolaou smear on all cases with a confirming surgical biopsy on suspicious lesions. A manual rectal examination is routine with proctosigmoidoscopic examination of all patients over 45 years. A complete blood count, a urinalysis and a serological test for lues are performed on all patients at their first visit. This entire procedure is repeated at the annual re-examination.

The results obtained in these Clinics gradually created an awareness among medical colleges of the importance of a thorough knowledge of cancer, and for the past three years groups of medical students from the Department of Preventive Medicine of Cornell University Medical College, have attended sessions of our Clinics at Memorial Hospital as an integral part of their clinical training. This is the first formal recognition by the medical colleges of this type of cancer control.

As the Clinics have grown, we have done our utmost to utilize all the available diagnostic techniques as aids in the accurate diagnosis of early cancer. This has necessitated a vast amount of clinical research into the value of these newer methods. When they have been found practical they have been included in the routine examination. Our close affiliation with The Memorial Cancer Center gives these Clinics the opportunity to act as pilot clinics for guidance and aid to the recently established cancer prevention and detection centers.

With these thoughts in mind I have invited the members of our staff who have conducted this clinical research in the Strang Cancer Prevention Clinics at the New York Infirmary and Memorial Hospital to submit brief reports of the results of their work during the year 1946.

## STATISTICAL REPORT FOR 1946

### *The Strang Cancer Prevention Clinic of the New York Infirmary*

THE VALUE OF statistical reports depends on their relation to previous years and a single year is of importance to indicate only the progress of the work and the degree of expansion necessary for more complete methods of diagnosis.

The fact that the first cancer prevention clinic was opened at the New York Infirmary ten years ago warrants a consideration of those statistics, not from the point of view of volume but rather from the angle of a successfully operated clinic in limited space in close association with a tumor diagnostic and treatment clinic. The number of cases is restricted to conform to other activities in this department. But, with all these handicaps, 1356 new patients were examined there in 1946 and 3016 return visits were made, giving a total of 4372 examinations in one year.

TABLE I
*Clinic Visits*

| | |
|---|---|
| New | 1,356 |
| Return | 3,016 |
| Total | 4,372 |

TABLE II
*Age Groups*

| | |
|---|---|
| 0-20 | 0.6% |
| 20-30 | 10.5% |
| 30-40 | 35.3% |
| 40-50 | 33.8% |
| 50-60 | 14.9% |
| 60-70 | 4.1% |
| Over 70 | 0.8% |

In this group 19 cancers were discovered, which maintains the average of 1.4 per cent of cancer incidence in apparently healthy individuals.

TABLE III
*Site of Cancers*

| | |
|---|---|
| Cancer of sigmoid | 2 |
| Cancer of skin | 2 |
| Cancer of labia | 1 |
| Cancer of cervix uteri | 2 |
| Cancer of fundus uteri | 1 |
| Cancer of breast | 11 |
| Total | 19 |

Other diseases, including precancerous lesions, are shown in Table IV.

TABLE IV

| | | |
|---|---|---|
| Gynecological and rectal lesions | 830 | 61% |
| Medical (cardiac, arthritis, diabetes, etc.) | 333 | 25% |
| Breast (mastitis, cyst, fibroadenoma) | 232 | 17% |
| Skin (nevi, papilloma, verruca) | 104 | 8% |

It will be noted that the percentage of these conditions equals more than 100 for the reason that some of the patients had more than one condition.

DOROTHY EKSTROM, M.D.
*Assistant Radiologist, New York Infirmary*

## STATISTICAL REPORT FOR 1946

### *The Kate Depew Strang Prevention Clinic of Memorial Hospital (Women's Division)*

THE CANCER PREVENTION CLINIC for women established in 1940 at Memorial Hospital has twice outgrown the space assigned to it. Therefore, it is appropriate to present the statistics for a single year as evidence of the amazing development of these clinics.

During the year 1946, 3,925 new female patients were examined. Their ages varied from 19 to 79.

The age group distribution was as follows:

TABLE I

| | *Age Group Distribution* | | *Age Groups of Cancer Incidence in Connecticut* |
|---|---|---|---|
| 10-19 | 1* | .0% | 2.4% |
| 20-29 | 350 | 8.9% | 2.6% |
| 30-39 | 1,304 | 33.3% | 4.4% |
| 40-49 | 1,397 | 35.6% | 10.7% |
| 50-59 | 687 | 17.5% | 24.4% |
| 60-69 | 165 | 4.2% | 29.6% |
| 70-79 | 21 | .5% | 19.9% |
| Over 80 | | | 4.7% |
| No statistics as to age | | | 1.3% |

*19 Years of Age.

In this table the average ages of patients attending the Strang Prevention Clinic are compared with the age incidence of cancer in Connecticut as quoted by Eleanor McDonald.

In the group of 3,925 patients who attended the Strang Prevention Clinic at Memorial Hospital, 361 failed to return for special examinations recommended by the examining physician and they have therefore been deducted from the 3,925 cases. In the remaining group of 3,564, we found 37 cases of cancer or 1.03 per cent. Of this number, 34 cases were definitely proved to be cancer by biopsy or operation. Three patients have not as yet returned to our Clinic in spite of repeated letters written to the patients and their physicians. This is a constant problem as many physicians neglect to send us the pathological diagnosis or the final outcome of the cases.

The cancers were found in the cervix uteri, rectum, breast, fundus uteri, skin, stomach, and kidney. The age group varied from 31 to 69 years. The following tables show the organs involved and the age groups:

TABLE II
*Sites of Cancers*

| | |
|---|---|
| Cervix uteri | 11 |
| Breast | 10 |
| Rectum | 7 |
| Fundus uteri | 3 |
| Ovary | 1 |
| Stomach | 1 |
| Kidney | 1 |
| Skin | 2 |
| Retroperitoneal Sarcoma | 1 |
| Total | 37 |
| *Age Distribution* | |
| 30-39 | 6 |
| 40-49 | 18 |
| 50-59 | 9 |
| 60-69 | 4 |

Accurate histories were taken on all patients and all important data concerning the history of familial cancer and civil status were recorded. In 2,119 there was a history of cancer in the immediate family. This probably prompted the patients to come to this clinic.

TABLE III
*Marital Status*

| | |
|---|---|
| Single | 482 |
| Married | 3,109 |
| Widowed | 216 |
| Separated | 27 |
| Divorced | 91 |
| *Family History* | |
| Positive for cancer | 2,119 |
| Negative for cancer | 1,806 |

In the latter part of 1946 it was decided to perform a routine proctosigmoidoscopic examination on every patient over 45 years of age and on any patient who had symptoms related to the rectum or large bowel. This may account for the large number of cases of rectal carcinoma discovered in this group.

It is of interest to note that in this group of 3,925 patients, 2,581 special examinations were made, some of which were as follows.

TABLE IV
*Special Examinations*

| | |
|---|---|
| Protoscopy | 357 |
| Gastro-intestinal survey | 197 |
| Gastro-intestinal series | 191 |
| Barium enema | 162 |
| Gall bladder series | 56 |
| Gastric analysis | 67 |
| Esophagram | 13 |
| Chest x-rays | 231 |
| Other x-rays | 172 |
| Cervical biopsies | 736 |
| Rectal biopsies | 27 |
| Aspiration biopsy of breast | 31 |

Aspiration biopsies of the breast are made in cases where a definite discrete tumor is palpated. If a positive aspiration is obtained it is of diagnostic value: however, a negative aspiration cannot be considered conclusive.

The gastro-intestinal survey differs from the gastro-intestinal series in that it is a research project and is made on patients over 45 years of age who have no gastro-intestinal symptons, in an attempt to find early or asymptomatic cancer of the gastro-intestinal tract.

After vaginal and cervical cytological smears have been taken, cervical biopsies are made in all cases where there is contact bleeding, cervical erosion, ulceration, growth, or inflammation. Rectal biopsies are done on all polyps found and all suspicious lesions seen. The proctoscope is advanced to 22 cm. whenever possible. If abnormalities are discovered during the proctoscopic examination an appointment for a barium enema is made. In the case of polypi a routine barium enema with air contrast is done.

In addition to the cancers found, precancerous lesions were discovered in 526 or 14.8 per cent of the total individuals examined. The following Table V shows their distribution.

TABLE V
*Precancerous Lesions*

| | | |
|---|---|---|
| Cervical erosion | 280 | |
| Leukoplakia | 62 | |
| Kraurosis | 11 | |
| Hyperkeratosis | 137 | |
| Rectal polypi | 22 | |
| Colon polypi | 2 | |
| Post-radiation skin changes | 1 | |
| Duct papillomata | 11 | |
| Total | 526 | (14.8%) |

These patients are either referred to a surgeon for excision of the lesion or are very carefully observed in our clinic. In cases where important clinical entities are discovered a letter is written routinely to the local physician.

Obviously in a clinic of this kind many non-cancerous lesions and constitutional diseases are encountered. The more important ones are shown in the following table.

TABLE VI
*Some Other Important Diseases*

| | |
|---|---|
| Duodenal ulcer | 24 |
| Diabetes | 25 |
| Diverticulosis | 13 |
| Chronic cystic mastitis | 392 |
| Fibrocystic mastitis | 55 |
| Fibroid uterus | 401 |
| Hypertension | 543 |
| Osteoarthritis | 118 |
| Secondary anemia | 109 |

It may be of interest also to note that among our patients there were 27 women who had been previously operated on or had received irradiation for cancer before admission to our clinic. We emphasize the fact that this clinic is maintained primarily for the examination of apparently healthy women but, nevertheless, some patients who conceal the fact that they have cancer or are unaware of it, do gain admission. They are listed in the following Table VII.

TABLE VII
*Previously Diagnosed and Treated Cases of Malignant Disease Seen in 1946*

| | |
|---|---|
| Breast | 14 |
| Skin | 7 |
| Ovary | 2 |
| Eyes (Melanoma) | 1 |
| Thyroid | 1 |
| Fundus uteri | 1 |
| Cervix uteri | 1 |

Approximately 5,000 former patients returned for examination in 1946. Many of them had first attended the clinic in 1940, others during the succeeding years, and none less than one year previously. In this group six cancers were discovered or less than two tenths of one per cent (.12%).

FRANCES H. BOGATKO, M.D.
*Assistant Attending, Strang Prevention Clinic*

GENEVIEVE M. BADER, M.D.
*Clinical Assistant, Strang Prevention Clinic*

## STATISTICAL REPORT FOR 1946

### *The Kate Depew Strang Prevention Clinic of Memorial Hospital (Men's Division)*

THE MEN'S CLINIC which was organized in 1944 has maintained a steadily increasing growth. The volume in 1946 was 343 more cases than were examined in the preceding twenty months.

The incidence of cancer remains approximately the same, one per cent, with a rather marked increase in precancerous lesions. The following tables, which are self-explanatory, are derived from the statistical data gathered in the Male Division of the Strang Cancer Prevention Clinic, Memorial Hospital, during the year 1946.

TABLE I

| | |
|---|---|
| Total No. of male patients seen in 1946 | 1,672 |
| Cancers | 16 or approx. 1.0% |
| Precancerous lesions | 146 or approx. 8.7% |
| Benign tumors | 253 or approx 15.1% |
| Constitutional diseases | 108 or approx. 6.5% |
| Total No. of special examinations given were | 1,487 |
| (In some cases two, three, or four special examinations were required) | |

The patients who failed to complete the entire routine are not included; also the patients referred back to their private physicians for further treatment are not tabulated because of the difficulty of securing complete follow-up data.

Applications for this clinic are taken as far in advance as six to eight months.

TABLE II

| Age Group | Distribution | | Age Groups of Cancer Incidence in Connecticut |
|---|---|---|---|
| 10-19 | 2 | 0.1% | 2.4% |
| 20-29 | 124 | 7.4% | 2.6% |
| 30-39 | 542 | 32.4% | 4.4% |
| 40-49 | 637 | 38.2% | 10.7% |
| 50-59 | 265 | 15.8% | 24.4% |
| 60-69 | 88 | 5.3% | 29.6% |
| 70-79 | 12 | 0.7% | 19.9% |
| Over 80 | 2 | 0.1% | 4.7% |
| No statistics as to age | | | 1.3% |
| Total | 1,672 | | |

TABLE III

| | |
|---|---|
| Basal cell carcinoma | 9 |
| Carcinoma of rectum | 4 |
| Carcinoma of larynx | 1 |
| Squamous cell carcinoma | 1 |
| Carcinoma of descending colon | 1 |

In general, these tables give a correct picture for the male department of the Strang Clinic for the year 1946.

JAMES H. EWING, M.D.
*Assistant Attending, Strang Prevention Clinic*

## CHEST SURVEYS AND OTHER RADIOLOGIC PROCEDURES

### *At the Strang Cancer Prevention Clinic of the New York Infirmary*

AT THE NEW YORK INFIRMARY a chest survey of every patient admitted to the Strang Cancer Prevention Clinic was considered early in the project, but was not made a routine procedure until the end of the war. Because of space limitations, both in the clinics, to some degree restricting admissions, and in the X-ray Department, where there is at present no room for photofluorographic apparatus, chest fluroscopy has been relied upon for our diagnostic screening. When the physician doing the fluoroscopy[1] feels any doubt, as in questionable or barely perceptible changes from the normal pattern of lung markings, films are made. In the last two years, for which detailed findings are given, films were made in about 3 per cent of the cases. Almost always these confirmed the impression of the fluoroscopist, whether negative or positive.

TABLE I

*Findings in 1342 Chest Fluoroscopies*
1946

| | |
|---|---|
| Lung tumor, primary or metastatic | 0 |
| Cardiovascular abnormalities | 116 |
| Active tuberculosis (proved) | 1 |
| Bronchiectasis | 0 |
| Old tuberculosis, fibrosis and calcification | 83 |
| Prominent hilum markings | 90 |
| Pleural adhesions | 18 |
| Substernal thyroid | 5 |
| Skeletal abnormalities, chest and shoulder girdle, vertebrae | |
| Calcifying peritendonitis, humerus | 62 |
| Vertebral osteoarthritis and/or scoliosis | 36 |
| Cervical rib | 8 |
| Other abnormalities, bifid fused or resected ribs, old fractures, etc. | 8 |
| No abnormality* | 938 |
| Number of cases | 1342 |

*The sum of abnormalities subtracted from total number of cases is not the same as the number of negative cases, because some patients showed more than one abnormality.

As appears in the table, no case of primary or metastatic malignancy of the lung was disclosed in a total of 2957 cases, and only a minimal number of other sorts of serious thoracic pathology, with the exception of cardiovascular abnormalities (not listed in detail), which occurred chiefly in that segment of our group at or past middle age. However, a few interesting if less serious conditions were discovered, and these, together with the two cases of lung cancer reported by Dr. L'Esperance[2] in the Strang-Memorial Hospital material, make the effort worth persisting in. Noteworthy support of the importance of x-ray chest examinations in all cancer control work is offered by Watson and Diamond[3], who reported from the New York Naval Hospital in Brooklyn upon 746 cases of neoplastic disease, of which 33 had thoracic tumors suitable for surgery. *Twenty-three of these had no symptoms and the diagnosis was made by routine chest films.* With such testimony as this, one would scarcely dare to omit a chest examination, even though no neoplasm was brought to light in the first 2957 cases. It should be noted that all the Watson and Diamond cases were males, who are more prone to develop lung cancer. All our patients at the Strang Prevention Clinics of the New York Infirmary are females.

The finding of only a single case of proved tuberculosis may appear surprising. Amongst the vast and rapidly accumulating literature on mass chest surveys, many sets of statistics show higher percentages of tuberculosis. This is true particularly in industry, hospital admission studies, and some army figures. However, a report by Schneider[4] on a chest survey made during the first six months' operation of the Fort Dix Separation

Center on individuals discharged for other than physical reasons showed 5 cases of proved active tuberculosis in 10,742 men, less than one in 2000, *and no evidence of pulmonary disease in any of the 291 women.* The presence of calcifying peritendonitis of the shoulder in a total of 138 individuals was unexpected, but as we treat quite a few such cases with irradiation therapy we were on the lookout for them. There is a personal equation in the finding of "increased hilum markings" and it is also not offered as a valid classification, but was noted for convenience at the time of fluoroscopy and left for the clinician to interpret where physical findings or history indicated. However, brief questioning of patients during fluoroscopy elicited a high proportion of persons with chronic sinusitis, and some asthmatics. We realize that the fluoroscopic screening method is not perfect, that it is possible to miss small early lesions of slight density, and that it does not provide a permanent record. It is a compromise forced by our present set-up, and is done in the belief that it is better than nothing. The photofluorographic method is an improvement in both respects, but one should remember that even 14x7 stereoscopic films have missed an occasional lesion, which remained to be picked up by body-section technique.

One of the big problems in cancer prevention examinations is to determine where to stop. This thought will have been developed, or implied, in other articles in this symposium. Under the limitations of space, time, personnel, and material costs, how far should we go? As radiological procedures lie in the relatively high cost field, the answer is important to radiologists and to departments of radiology. Should we examine all of the bony skeleton on the chance of picking up an early bone tumor? One is forced to recognize this is a Herculean, probably an impossible task. Our policy in this clinic so far has been to do bone, gastro-intestinal, and other roentgen studies, except chest fluoroscopies, only when the clinical examiner thinks she has uncovered some indication. Results of the Strang-Memorial studies and others should add to the delimitation and solution of these matters.

Our problems at the New York Infirmary vary also as our set-up varies from the Memorial Hospital Clinic. There all efforts are directed toward preventing and detecting cancer in supposedly well persons, with no treatment offered. At the Infirmary, a Prevention Clinic and a Tumor Clinic are housed in the same quarters and staffed by the same individuals. Tumor Clinic patients are sometimes put through the Prevention Clinic routine, on the suspicion that lesions may be found elsewhere than in the area originally referred for study. Prevention Clinic patients presenting positive findings quite frequently have no regular doctor and express a desire to carry on into the Tumor Clinic, perhaps with the same doctor who first examined them. Our lines are not so sharply drawn as at Memorial Prevention Clinic. For example, a woman appears stating that she is "perfectly well," but shortly adds that she suffers from "a lot of gas that seems to press into her chest." She is afraid she may have cancer. We accept her as a Prevention Clinic patient, but she might as logically have gone to the Gastric Section of the Tumor Clinic. What she actually showed on roentgen examination was a large esophageal hiatus hernia, with nearly a third of her stomach in her chest. She was dispatched elsewhere for medical advice. With this sort of overlapping, and the fact that one x-ray department serves both sets of clinics, the present pressure of events tends to give priority to suspected cases. This is not ideal, but the situation is described because it may well obtain in other Prevention Clinics set up in general hospitals. An accumulation of experience will undoubtedly point the way to an improved return for the energy and cost expended.

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## ROENTGENOSCOPIC SURVEY FOR ASYMPTOMATIC GASTRIC CANCER*

THIS IS A preliminary statement based upon an x-ray survey of 1576 patients for the detection of symptomless tumors of the stomach. This work was begun in the latter part of 1945 and is still in progress. The present purpose is merely to record the results so far attained. A more comprehensive communication is planned for the future.

The survey is being carried out in conjunction

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with the Strang Cancer Prevention Clinic, a division of the Memorial Cancer Center. The funds supporting the study are supplied by the Strang Clinic. All patients come from this source, and the organizational details are handled by the clinic.

All patients 45 years of age or older who have no gastro-intestinal symptoms are considered eligible. Each person in this category is strongly urged to appear for the examination. About 80 per cent of those eligible actually took the test. There were 74 per cent males in this group. The age range was by no means ideal for detection purposes as can be judged from the following:

| | | | |
|---|---|---|---|
| 45-49 yrs. | 44.5% | 65-69 yrs. | 1.5% |
| 50-54 | 27.6 | 70-74 | 1.0 |
| 55-59 | 15.0 | 75-79 | 0.3 |
| 60-64 | 9.6 | 80-84 | 0.3 |

It is evident that the bulk of this material is in the younger age groups where the incidence of stomach cancer is less.

From the standpoint of management it is necessary to have an efficient medical group for the selection of patients, for the making of appointments, and for the keeping of records. The examination itself requires the services of a roentgenologist competent in fluoroscopic examination of the gastro-intestinal tract. Finally one maid-attendant is needed. Excluding the roentgenologist's services, the cost is less than that of a photo-roentgen film of the chest.

It is clearly emphasized to the patient that the value of the study is limited, and that the test cannot be used as a basis for treatment. Patients are simply told that if anything suspicious is revealed, they will be notified within a week's time to return for a regular x-ray examination of the stomach.

This survey was carried out by the Swenson method[1], that is, a rapid fluoroscopic examination of the stomach in the upright position. By this means 20 to 25 patients were examined hourly. This rate could have been increased by using a more efficient assembly-line supply. Other methods of using the x-ray to detect symptomless gastric cancer have been proposed, and some of these are in use. For instance, Swenson[2], among others is now adapting the photo-roentgen unit for this purpose. Rigler[3] has been selecting his material by means of a preliminary gastric analysis. Following this a complete x-ray study of the stomach is done on those patients in whom hydrochloric acid is low or absent.

Needless to say not every examination in the present series could be considered as fully satisfactory, although there was practically no study that was not of some value. Causes of unsatisfactory examinations were in the main due to the patient's failure to carry out the preparation instructions. Other less frequent causes were failure of the patient to relax the abdomen, pylorospasm with slow emptying, presumably of psychogenic origin, and obesity. Of the total number 1399 were considered to be entirely satisfactory with 177 showing varying degrees of limitation.

There were three tumors discovered in this series. The first was a myosarcoma of the lower portion of the esophagus. This tumor was removed and the patient is well with no evidence of recurrence over one and one-half years. The second cancer was an unusual carcinoma of the stomach showing in the resected specimen two small and separate polypoid cancers, associated with multiple superficial plaque-like carcinomas. The prognosis in this case is guarded because of the nature of the cancer, it being possible that some of the small plaque foci were left behind. The third tumor awaits removal within the next few weeks. It is a 2 cm. polypoid lesion in the distal part of the antrum.** All tumors have been in women. Re-questioning after the discovery of these tumors affirmed that they are for all practical purposes truly asymptomatic processes.

A number of interesting lesions of the upper gastro-intestinal tract were revealed in the course of this study. For example, there were two instances of Zenker's type diverticulum of the esophagus. Instances of herniation of the gastric mucosa through the pylorus were seen. There were cases of hiatus hernia of various types and degrees, torsions of the stomach, gastric diverticula, situs inversus, heart valve calcification, gall stones, duodenal bulb deformities in asymptomatic patients, esophageal diverticula, and so on.

At the present time it is felt that the rapid roentgenoscopic method for the detection of symptomless gastric tumors holds the most promise, being simple and reliable. Technical improvements in the fluoroscope of recent date with more promised for the future enhances the outlook for this system. The disadvantages of the fluoroscopic method are that it requires relatively more of the time of the roentgenologist and that the dangers of exposure may be a limiting factor for the examiner.

Approximately 5 per cent of the patients in this group were reexamined after a year's interval.

**This tumor has since been removed and proved to be a polyp.

Of course this number is not sufficient in itself to serve as a check on the accuracy of the study. However to date there has been no evidence that any tumor has been missed.


### Summary

1. 1399 satisfactory rapid roentgenoscopic examinations have been carried out on 1576 patients 45 or older without stomach complaints.

2. Three tumors of the upper gastro-intestinal tract have been revealed in this group.

3. Both better selection of material and technical advances in the fluoroscope promise better returns in the future.



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## RECTAL AND COLON SURVEY

### Strang Cancer Prevention Clinic—1946

Until the actual cause of cancer is determined and a method devised to combat it, we must strive for an earlier diagnosis and the recognition of precancerous lesions within the lower intestinal tract. It is now an accepted fact that the intestinal polyp constitutes a precancerous lesion in many instances. The detection of this lesion before it undergoes malignant changes truly presents a diagnostic challenge. Our present radiographic methods are still wanting in accurate demonstration of the smaller polypi within the colon. Definite standards for sigmoidoscopic examinations have not been established. There has also been reluctance on the part of the general practitioner, internist, and general surgeon to accept proctosigmoidoscopy as part of the general physical examination. It has been the policy of the Strang Cancer Prevention Clinic to submit all applicants above 45 years of age to proctosigmoidoscopic examinations. Younger applicants presenting any significant symptoms referable to the lower intestinal tract are also asked to submit to this examination. Rectal bleeding is considered the most urgent indication.

Preparation for the examination is accomplished with two ounces of castor oil. In obstinate cases, nightly cleansing enemas are suggested for one week and two ounces of castor oil given the evening prior to examination. Purgation of the intestinal tract has in many instances been helpful in revealing significant findings, especially blood or excessive mucus within the bowel at proctosigmoidoscopic examination. On many occasions these findings have not been observed with less preparation.

All applicants are examined in a modified knee-chest position, resting their weight on the left shoulder. The sigmoidoscope is passed under direct vision, inflation of the bowel being used when necessary. The scope is also withdrawn under direct vision, so that the entire circumference of the bowel is observed. Bowel content as well as mucosal lesions are noted. Biopsy is made of all lesions and Papanicolaou studies are now being done of any blood stained mucus.

In applicants manifesting areas of mucosal hyperplasia, true polypi, ulcers, unusual spastic areas, blood stained mucus, and a limited sigmoidoscopy, a barium enema with air contrast studies is done. In many instances repeated roentgenographic studies must be done when findings are reported negative and blood stained mucus persists at proctosigmoidoscopic examination.

*Applicants Examined*

| | |
|---|---|
| Females | 347 |
| Males | 664 |
| Total | 1011 |

*Types of Lesions Found*

| | |
|---|---|
| Polypi | 61 |
| Carcinoma | 3 |
| Polypi with cancer | 2 |
| Carcinoid | 1 |
| Myoma | 1 |
| Total | 68 |

*Sex Distribution*

| | |
|---|---|
| Polypi—Female | 16 |
| Polypi—Male | 45 |
| Polypi with cancer—Male | 2 |
| Carcinoma—Female | 1 |
| Carcinoma — Male | 2 |
| Carcinoid—Male | 1 |
| Myoma — Male | 1 |

*Anatomical Distribution*

58 Polypi, visualized with 25 cm. sigmoidoscope.
8 Polypi, visualized only on barium enema.
4 Cancers, visualized with sigmoidoscope.
1 Cancer, visualized only on barium enema.
2 Other tumors, visualized with sigmoidoscope.

### Conclusions of Survey

1. Applicants above the age of 45 years and anyone having chronic rectal bleeding are asked to submit to proctosigmoidoscopic examination.

2. Preparation of applicant and technique of examination in a general clinic are as described.

3. The colon is examined by means of a barium enema with contrast technique.

4. 1011 applicants were examined.

5. 0.5 per cent of applicants had cancer of colon or rectum.

6. 6.0 per cent of applicants had polypi.

7. 4.6 per cent of female applicants had polypi.

8. 6.8 per cent of male applicants had polypi.

9. 88 per cent of the lesions were visualized at sigmoidoscopy.

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## DIAGNOSIS OF CANCER

### *By the Papanicolaou Smear Method*

#### INTRODUCTION

SINCE DR. G. N. PAPANICOLAOU discovered the presence of cancer cells in vaginal fluid in the pre-invasive phase of cancer, the problem of early diagnosis of cancer has attracted wide interest. It is based on the principle that malignant cells, because of their high proliferative activity, exfoliate and desquamate long before the clinical lesion is recognized. In addition to vaginal fluid, this test can be used with various types of body fluids which contain the desquamated or exfoliated cells. These fluids may be bronchial secretions, gastric contents, urine sediment, or sputum.

The purpose of this paper is to present data obtained in 1946 from the Strang Prevention Clinic of Memorial Hospital and an outline of the technique employed. Approximately 4000 asymptomatic individuals had vaginal and cervical smears as a screening method for the detection of early cancer of the female genital tract. In presenting this data, it is our aim further to confirm the value of this test in the early diagnosis of cancer of the genital tract, and to encourage its application to other body fluids as a screening method for detection of cancer elsewhere in the body.

#### METHODS FOR OBTAINING SMEARS

*A. Vaginal Smear*:

Patient should not have douched for at least twelve hours.

Smear must be taken *before* any lubricant is used.

Patient is placed in lithotomy position. A special glass pipette, attached to rubber bulb is inserted, with bulb compressed.

Tip of pipette is inserted high into the vaginal vault, and moved about slightly. Upon withdrawing the pipette, the bulb is slowly allowed to decompress.

The aspirated material is then sprayed on a microscope slide, and another slide used to spread the material. This gives two slides upon which material appears. To one of these, a paper clip should be attached and both are dropped *while wet* into a fixative. The purpose of the paper clip is to prevent slides from sticking together.

*Fixative*: equal parts of 95% methyl or ethyl alcohol and ether.

Slides so prepared may remain in the fixing solution, provided they are covered by solution, for an indefinite period of time.

*B. Cervical Smear*:

The cervix is exposed through the use of a bivalve speculum.

Lubricant is often necessary to insert the speculum, and it is therefore imperative that the cervix be *gently* swabbed with a soft cotton ball.

A cotton tipped applicator may then be passed around the external os and into the os.

The material thus obtained is lightly spread on the microscope slide and the slide treated as aforementioned.

*C. Endometrial Smear*:

In some cases it may be advisable to obtain material directly from the endometrial surface.

For this purpose a special infant laryngeal cannula is used.

Usually no dilatation of the cervical canal is necessary, but when the internal os is resistant, a uterine sound or the smallest Hank dilator may be used.

The cannula is gently inserted beyond the internal os, and then attached to a five cc. syringe. Moderate suction is produced by withdrawing the plunger about halfway. This causes aspiration of loose material from the endometrium into the tip of the cannula.

The syringe is then detached, and the cannula withdrawn.

By re-attaching the syringe, the aspirated material can be sprayed on the slide, and the slide treated as described.

**TABLE I**
**Laboratory and Clinical Data in 13 Cases of Carcinoma of the Uterus, Ovary, and Tubes Proven by Vaginal Smears and Confirmed by Biopsies**

| Chart Number Patient | Age | Findings on First Gyn. Exam. | First Positive Vaginal Smear | Further Vaginal Smears | Biopsy | Treatment and Clinical Course |
|---|---|---|---|---|---|---|
| 2,220 C.H. | 42 | Cervical erosion | 12-11-46 IV | 3-20-47 IV | 5-14-47 Intraepithelial epidermoid ca. | Hysterectomy |
| 2,847 D.M. | 42 | None | 8-8-46 IV | None | 10-19-46 Epidermoid ca. Gr. II | No follow-up |
| 4,850 C.R. | 35 | Cervical erosion | 1-2-46 IV | 2-14-46 IV | 1-29-46 Intraepithelial ca. | Hysterectomy |
| 4,999 M.J. | 40 | Chronic cervicitis | 1-23-46 III | 10-31-46 III | 1-23-46 Intraepithelial ca. | Hysterectomy |
| 5,409 S.B. | 47 | Granular erosion | 1-11-46 IV | None | 1-11-46 Epidermoid ca., Gr. II | Irradiation. Subsequent vaginal smears negative |
| 5,465 E.S. | 45 | None | 1-15-46 III | None | 1-23-46 Intraepithelial ca. | Irradiation |
| 5,500 G.B. | 48 | Cervical erosion | 1-18-46 IV | 2-1-46 IV<br>2-26-46 IV | 1-26-46 Intraepithelial (?) ca. | No follow-up |
| 6,516 J.F. | 45 | Cervical erosion | 4-3-46 III | 1-28-47 III | 4-4-46 and 4-17-46 Intraepithelial ca. | No follow-up |
| 7,676 F.S. | 44 | Cervical polyp and erosion | 6-13-46 IV | None | 6-11-46 and 6-24-46 Intraepithelial ca. | Hysterectomy |
| 8,020 E.R. | 49 | Cervical erosion | 6-20-46 III | 7-12-46 IV | 7-13-46 Epidermoid ca., Gr. III | No follow-up |
| 8,707 J.K. | 56 | Vaginal bleeding | 8-13-46 III | None | 3-5-47 Adenocarcinoma | Hysterectomy |
| 9,085 R.M. | 61 | Cervical polyp | 9-13-46 III | 12-6-46 III | 3-22-47 Spindle cell sarcoma | Operation for retroperitoneal tumor with metastases to uterus |
| 10,412 M.R. | 44 | Cervical erosion | 10-25-46 IV | None | 11-26-46 Epidermoid ca. Gr. II | No follow-up |

### Classification of Reports of Vaginal and Cervical Smears as Applied to the Diagnosis of Malignant Neoplasms of the Genital Tract.

*Class I*: Absence of abnormal or atypical cells.

*Class II*: Atypical cells present, but without abnormal features.

*Class III*: Cells suspicious for malignancy but not sufficiently pathognomonic for cancer.

*Class IV*. Fair number of pathognomonic cancer cells and cell clusters.

*Class V*: Large number of positive cancer cells and cell clusters.

A smear classified as "I" requires no immediate repeat of the smear until the next visit of the patient, i.e., for patients under forty-five a yearly pelvic examination and smears, and for patients over forty-five a pelvic examination and smears every six months.

A smear classified as "II" requires repeat of the cervical and vaginal smears every three months.

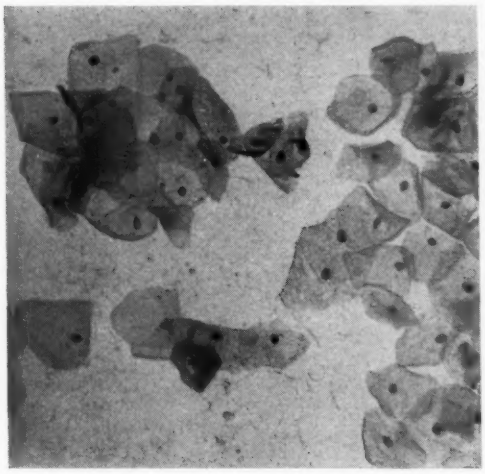
A smear classified as "III" requires immediate repeat of the smear and further exploration of the pelvis, such as biopsy or D & C.

Smears classified as "IV" and "V" require immediate repeat of smears and performance of a biopsy or curettage for confirmation of the diagnosis.

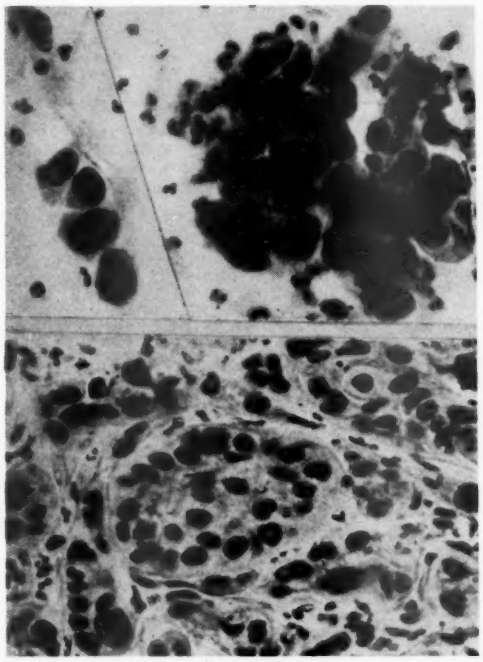
### Cervical and Vaginal Smears on New Patients

1946 ..... 4,160

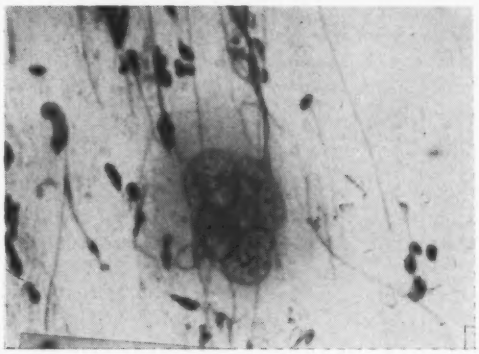
The case, No. 6720 HH, has not as yet been confirmed by biopsy, and therefore, is not included in Table I. Whether it is a true False Positive smear is difficult to determine for the time being. Further investigations and exploration of this



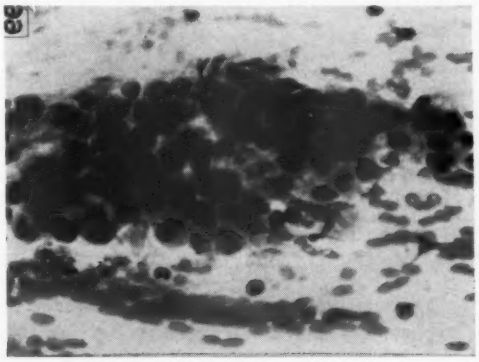
Normal vaginal smear showing superficial epithelial cells.



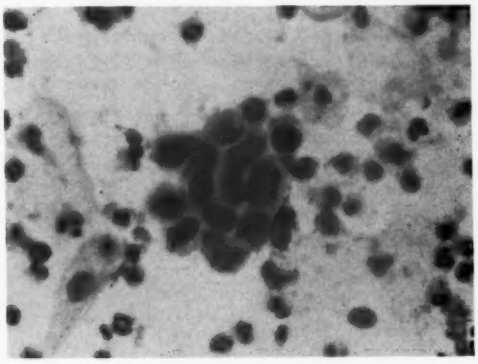
Vaginal smear and biopsy of squamous cell carcinoma of the cervix.



Cluster of suspicious cells. Class III. Case 8716 H. D.



Intra-epithelial epidermoid carcinoma. Vaginal smear of Case 5500 G. B. Magnification X 400.



Cluster of malignant cells—epidermoid type—as seen on vaginal smear of Case 6720 H. H. Magnification X 400.

patient will prove or disprove the accuracy of the diagnosis of the smears in this case.

We have also reviewed a number of earlier smears, which were reported as suspicious or positive but failed to be confirmed by subsequent biopsies. Should these be reclassified now in

accordance with the Papanicolaou recent classification, they would fall into Groups II and III. As our criteria for malignancy become more crystallized and with this more flexible classification, the number of False Positives should be greatly reduced.

In one case, No. 8716, H. D., there were two consecutive negative smears, prior to biopsy report. The first biopsy report gave the diagnosis as epidermoid carcinoma. Later biopsies revealed that the picture was that of intra-ephithelial carcinoma (carcinoma *in situ*). In partial explanation of these negative smears, we would state that the material was scanty and poorly stained.

TABLE II

| *Type and Location of Cancer* | |
|---|---|
| Intra-epithelial epidermoid cancer of cervix (Carcinoma *in situ*) | 8 |
| Epidermoid cancer of cervix, Gr. II | 3 |
| Epidermoid cancer of cervix, Gr. III | 1 |
| Adenocarcinoma fundus | 1 |
| Metastatic spindle cell sarcoma of uterus | 1 |

SUMMARY

During 1946, 4160 females had vaginal and cervical smears as a screening method for detection of early carcinoma of the genital tract.

Of the number examined, the smears of 14 patients were diagnosed "positive" or "highly suspicious" for carcinoma.

In 13 of the cases, biopsies confirmed the findings of the smears.

One case has yet to be confirmed by biopsy.

This screening method for cancer revealed one case of carcinoma of the female generative organs per about 350 patients. The type of carcinoma, its location, age of patients, findings on gynecological examination, and other details are shown in Tables I and II.

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## DIAGNOSIS OF CANCER

### *The Technique of Taking Biopsies*

SINCE THE FINAL diagnosis of cancer is in the hands of the cellular pathologist today and there is at present little indication for a change, it is essential that in cases of tumor we utilize all possible means to obtain tissue for microscopical examination. Recently the development of the Papanicolaou technique for staining smears made from desquamated cells contained in fluids such as bronchial washings, gastric washings, urine, vaginal secretion, and ascitic or pleural fluid, gives increased opportunity for microscopic diagnosis of hiterto obscure lesions. It is our purpose in this discussion to outline simple methods of obtaining biopsy material from tumors of various kinds and locations.

Skin tumors are of many kinds and are generally noticed early by patients and brought to the attention of physicians who frequently say, "if it does not bother you, let it alone." It has been said that every individual will develop cancer of the skin if he or she lives long enough. The age for development of the lesion varies with the type of skin, exposure to the elements and other irritants, and the care which the skin receives. Keratoses or hyperkeratoses are the commonest skin lesions developing in middle age or later. They are usually of long duration and change

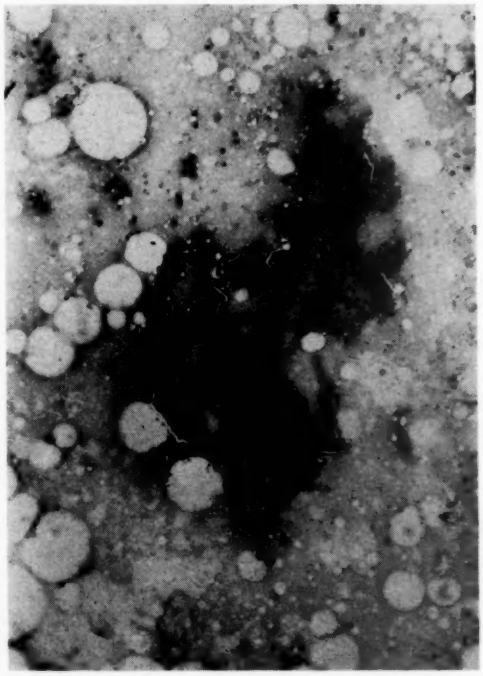

***Fig. 1*—A sheet of cells obtained from a fibroadenoma of the breast by aspiration biopsy.**

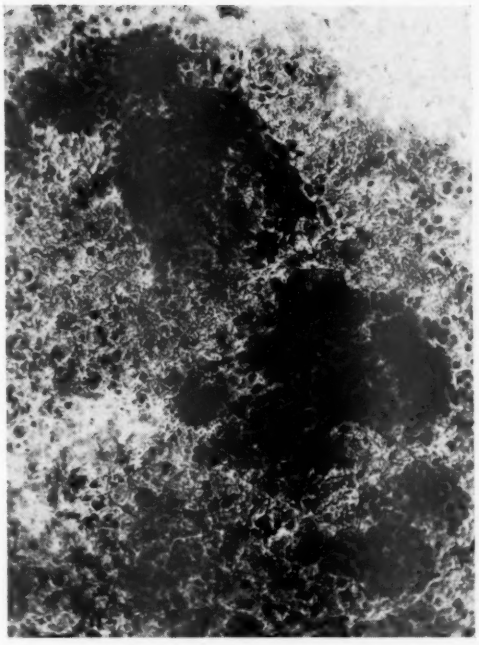

*Fig. II*—Cancer cells removed through a 17 gauge needle from a breast tumor.

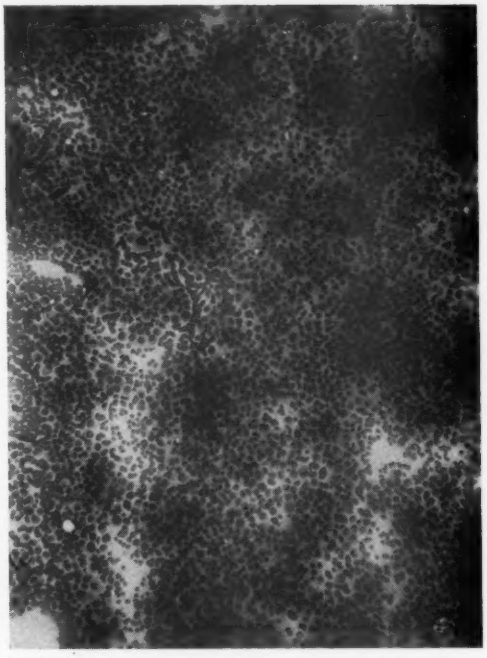

*Fig. III*—A diffuse smear of cells obtained from a mammary carcinoma by aspiration technique.

to a crusted and eventually an ulcerated stage over a period of years. In the keratotic stage, it is probably perfectly safe to remove the lesion by monopolar electrodesiccation, but we would like to plead for surgical excision, certainly of the first few lesions the individual develops, only for one purpose, and that is to have a biopsy. Such excisions may be done with local anesthesia on an ambulatory patient, without much expense in time or money to the individual. With any lesion which is excised for biopsy or otherwise at least 1 or 2 mm. of surrounding normal skin on all sides should be removed also. In this way, practically all basal cell carcinomas will be discovered, and radiation to the scar, in regions where this is not contraindicated, will be sufficient to prevent recurrence.

The same technique of surgical excision for biopsy should be utilized for many questionable skin lesions in early stages before ulceration. In this way many lesions, such as dermatomyoma, keratotic papilloma, pigmented basal cell tumor as distinguished from a nevus or melanoma, sclerosing angioma, cornu cutanei, and many other rare tumors, will be diagnosed.

There are two common types of congenital skin lesions which have very marked difference in potentiality for malignant degeneration. One of these is the angioma or hemangioma, a congenital tumor made up of endothelial-lined channels. These tumors are usually noticed in the first few weeks of life and grow rapidly in the first year. They should not require biopsy for diagnosis, and surgical excision in the first year is frequently followed by recurrence, so the preferable treatment is the use of sclerosing agents. If the growth is not treated early or is not controlled in the first year, surgical excision may be desirable for cosmetic reasons.

The second type, the pigmented tumor or nevus, is an entirely different structure histologically. It is influenced by hormones, as shown by the fact that many appear at puberty and many grow during pregnancy. The history of a preexisting pigmented nevus in about half the cases of malignant melanoma indicates the relationship between these two lesions. The plea we want to make is for complete surgical excision, with a margin of normal skin, and pathological examination of all pigmented lesions. The removal of this tissue serves as a biopsy and, if the lesion is a benign nevus or neuronevus, is sufficient treatment. An exception can be made in cases of children before puberty. In the early years of life, very large

pigmented nevi may be removed segmentally without danger.

Large ulcerated tumors of skin or mucus membrane can be removed for biopsy with simple instruments which have a moderately sharp cutting surface and a small cup to obtain a piece of tissue 3 or 4 mm. in diameter. Similar tissue for biopsy can be taken through the various endoscopic instruments such as the proctoscope, laryngoscope, esophagoscope, bronchoscope, and cystoscope.

The most difficult lesions to diagnose or differentiate are the tumors of the breast and soft somatic tissues. For these there is no aid from the roentgenogram in most instances, and in spite of expertly trained examining fingers, many clinical diagnoses prove wrong when histological study is made of excised tissue. If a correct preoperative diagnosis can be made, there are several advantages to the surgeon and patient. The technique of aspiration biopsy was devised for these tumors situated in the subcutaneous and deeper soft tissues. By the use of a 16 gauge needle and syringe, a plug of tissue the diameter of the needle and several millimeters long can be obtained from many lesions through an incision that is healed in forty-eight hours. This technique has been extremely valuable for mammary tumors. Some breast tumors such as cysts and abscesses will absorb after the removal of the fluid in the cavity. The greatest usefulness is, however, for diagnosis of carcinoma of the breast, obviating excision of the tumor in an operating room, frozen section diagnosis, and uncertainty in the mind of patient and relatives.

The equipment needed for making an aspiration biopsy may be kept in a sterile tray ready for use at all times. It consists of the following: A small syringe and hypodemic needle for insertion of novocaine, a two-inch 16 gauge needle, with fitting 20 cc. Record syringe, a two-inch 20 gauge needle, also fitting the Record syringe, a pointed bistoury, 1 per cent procaine solution, and several sterile glass slides. The hands are cleansed with soap and warm water, followed by 70 per cent alcohol and drying. We have not used sterile gloves in recent years, but their use is a wise safeguard, when developing a new technique. The patient's skin over the tumor is prepared with zephiran or metaphen. One per cent procaine or novocaine is inserted intradermally at the site selected for puncture, and a good wheal raised after which 1 or 2 cc. are injected deeper in the pathway to the tumor. With the pointed bistoury, a puncture 2 to 3 mm. long is made at the site of the needle puncture. The 16 gauge needle with stilette in place is introduced through the puncture wound and down to the tumor with the right hand while the tumor is held immobile with the left hand. The stilette is removed from the needle and the Record syringe with plunger completely down is attached firmly. The plunger is drawn out halfway and held in this position with the right hand. While the tumor is held with the left hand, the needle is advanced through the tumor and back two or three times with suction continuously maintained. The biopsy will be cut by the advancing needle and the tissue drawn up into the needle. The suction is cautiously released so as not to dislodge the material inside. The syringe is disconnected from the needle, and the needle then removed separately from the tissue. The tissue in the needle is dislodged on to a glass slide with the stilette. Two slides are used to compress the tissue and make a thin smear. When the tumor is very cellular and some blood comes into the needle, it may be allowed to clot with the included tumor cells and fixed and sectioned as any other tissue. The thin smears are fixed and stained with hematoxylin and eosin and may be examined within a half hour after removal from the patient. The wound in the skin needs protection with a small sterile covering for forty-eight hours.

Reading or interpreting the aspiration biopsy requires a highly trained pathologist who is interested in perfecting the technique. In mammary tumors, it has been more than 90 per cent correct for the diagnosis of carcinoma.

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## PROGRESS IN THE DIAGNOSIS OF CERVICAL CANCER

THE OCCURRENCE of 8 cases of non-infiltrating carcinoma of the cervix (carcinoma *in situ*) in the Strang Clinic during 1946 and similar experiences in other clinics indicate not only that this lesion is rather common but that the methods for its diagnosis are readily available. The best five year survival figures following treatment of clinically infiltrating cervical cancer do not exceed approximately 40 per cent; whereas it would be anticipated that in its non-infiltrating state most, if not all, cases could be cured by relatively simple surgical procedures.

Since the female public is enthusiastic in a demand for complete physical examination at regular intervals, physicians must now be armed with full knowledge of the nature of this disease in its preclinical state and the methods by which it may be detected.

As a rule, non-infiltrating carcinoma of the cervix is a lesion that does not cause clinical symptoms; moreover, it is often not evident even on the most careful visual examination of the cervix. Indeed, the cervix may appear clinically more "normal" than that of the average patient seen in the office of a gynecologist. Awareness on the part of the physician simply of the existence and serious implications of this lesion serves the future welfare of his patient better than his clinical acumen for, fortunately, other methods for diagnosis are available.

Since carcinoma of the cervix, even in its pre-invasive form, is a desquamative lesion, the examination of vaginal and cervical smears by the method of Papanicoloau has served as a valuable screening method and has indicated in many instances those cases in which other methods were needed to establish a diagnosis. It should be clearly understood that abnormal cells appear in such smears only when a carcinoma is already present. While it is notably accurate in the hands of a few experts, the application of this method of diagnosis of uterine cancer is still in its infancy. Until more general experience is acquired, the method must be saved from jeopardy by the protection of pathologic confirmation, usually easily acquired by biopsy, before treatment is instituted. Contrary to the reluctance of former years, the securing of cervical biopsies is currently regarded as a simple office procedure by gynecologists who now have no hesitancy in obtaining even multiple pieces of tissue from the cervix. This greater freedom in obtaining biopsy material has, even before the popularity of the Papanicoloau smears, served to uncover many unsuspected cancers of the cervix.

The pathologist too must meet the challenge for early diagnosis of carcinoma of the cervix. He has for many years recognized the non-infiltrating form of cutaneous cancer, but Schiller in 1928 first recognized accurately the histologic features of the analogous tumor in the cervix in the period preceding its infiltration and appearance as a clinically evident disease. These features have now become more fully clarified. However, such great controversy has occurred in the interim concerning the nature and exact interpretation of the minimal pathologic changes in pre-invasive carcinoma of the cervix that some cases have been followed for a number of years before the tumor finally appeared in clinically recognizable form.

This experience has already led to a change in the concept of the life history of cancer of the cervix; namely, that the clinically occult non-infiltrating form of the tumor is a torpid one that precedes the clinically infiltrating cancer, not by weeks or months, but probably by years. The same experience should lead to a determination by physicians to make use, by intensive and exacting study of each case, of this known interval in which the cancer is incapable of serious harm to the patient and thus to reduce materially the figure of more than 17,000 women who die each year in this country of cancer of the uterus.

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## EDUCATION

EDUCATION is the corner stone on which all cancer control must eventually depend. The need for education of the public in cancer brought into being the vast organization known as the American Cancer Society and all its local divisions.

The same need for education brought about the creation of the Strang Cancer Prevention Clinics, to emphasize not only to the laity but to the medical profession the need for routine periodic cancer health examinations. This educational phase is carried on by our staff members through lectures sponsored by medical societies to lay groups or clubs, or to newly organized cancer prevention and detection centers. Post-graduate medical students are offered practical training in the Strang Prevention Clinics, Memorial Hospital, in the various phases of the work. For the past three years undergraduate courses have been offered to third year medical students from accepted medical colleges. Unfortunately, the number of applications from post-graduates far exceeds our present capacity to accommodate them.

The United States Public Health Service grants fellowships to their graduate physicians for a short course in these Clinics, before the candidate assumes the responsibility in a given Public Health Zone.

The New York City Cancer Committee has sponsored seventeen Cancer Prevention Centers in approved hospitals in New York City as part of its educational program. These Clinics maintain similar standards to those in effect in the Strang Cancer Prevention Clinics. That is, they accept for examination only presumably healthy individuals and refer the patients in whom some disease is discovered to their own physicians for treatment. If they have no physician, they may select one from a list endorsed by the County Medical Society.

As an educational program in preventive medicine these Clinics are accomplishing three very desirable aims:

1. By making the public cancer conscious;
2. By educating our younger doctors as to the importance of complete periodic systematic physical examinations;
3. By stimulating the medical profession to realize the far reaching value of recognizing cancer in its early stages.

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## SUMMARY

THIS SURVEY is an attempt to review the activities which have developed gradually in the Strang Cancer Prevention Clinics and emphasize their intrinsic value in the early diagnosis of cancer.

The statistical reports reveal several interesting features in the progress of cancer prevention. They show the ever widening demand for this type of periodic cancer health examination and indicate an awareness of the importance of early diagnosis of cancer among the younger individuals, as more than two-thirds of the patients who applied at the Clinics were in the age group of 30 to 49 years. This is in direct contrast to the cancer incidence in age groups of 40 to 59 years reported by Eleanor McDonald *(see pp. 156-159)*.

These figures may serve to account in part for the rather low incidence of cancer discovered among our cases, that is, approximately 1 to 1.4 per cent. A further statistical fact may be emphasized, that less than two tenths of one per cent of cancers were found in return patients. This observation is of interest as some of these patients had been regular attendants at the Clinics for seven years.

Some space is given to the successful operation of a Cancer Prevention Clinic in close affiliation with a tumor diagnostic clinic as maintained at the New York Infirmary.

Detailed reports are given of the various clinical research problems sponsored by these Clinics and the merits of each project are analyzed with a description of the method used.

The gastric survey although of interest is still a purely clinical research problem.

However, the proctosigmoidoscopic examination, as a routine, has become invaluable in the early diagnosis of cancer of the sigmoid and rectum.

The photo-roentgenographic and fluoroscopic examination of the chests of all patients is a standard procedure, well established as a diagnostic measure, and of definite value in early cancer of the lung and mediastinum.

The value of the Papanicolaou smear technique as an aid in the early diagnosis of uterine and cervical cancer is clearly demonstrated by the results of this investigation in our Clinics and it has become a routine procedure on all patients.

Aspiration and cervical biopsies must always retain an important place in the early diagnosis of cancer. As our statistics show, they are the means of final diagnosis in a large percentage of suspicious lesions. This is revealed in the report of the rectal and colon survey and is the deciding factor in the Papanicolaou smear results.

The educational value of the Clinics is stressed, for the future success of this type of periodic cancer health examination rests on the adequate training of physicians in the use and interpretation of the newer technical diagnostic methods and their wider application among general practitioners.

This type of preventive medicine is still in the formative period. The future expansion and ultimate value of periodic cancer health examinations in the control of cancer must rest on the experience, enthusiasm, and adequate training of the medical profession, for these examinations must eventually become part of the routine practice of medicine.

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# Making the Doctor Cancer Conscious

**Madge Thurlow Macklin, M.D.**

DURING THE LAST decade, the public has been made increasingly aware of cancer as a cause of death. Patients have been urged to come early for diagnosis: they have been assured that cancer is curable if caught early, they have been told to watch for abnormal bleeding and lumps, for sores that will not heal. Much still needs to be done in educating the public; but it seems to me that perhaps the time has come when it is desirable to educate the medical profession. This statement will no doubt arouse a great deal of resentment, because each physician who reads this will feel at once that he or she is in no need of education in the early recognition of cancer; each will be certain that no early cases are missed by him. Unfortunately, we have no idea of how many cases we miss, for not having recognized the cancer in the first place, we naturally do not include the missed diagnoses in the category of cancer cases. We see only our successes and have no way of telling how many failures we have because there is no way of checking on them.

During the past two years, I have been working in the field of cancer research, and my material has been patients drawn from a large area treated by a wide group of practitioners, some of whom are in general practice and some in specialties. I have been amazed at the histories which an appreciable percentage of these patients gives. Not once, moreover, was the history given in an attitude of blame or resentment against the doctor who had failed in making the diagnosis; the patient was usually grateful that the physicians had found it when they did thinking that it had existed but a few weeks before the final diagnosis. Following are a few typical examples of such histories.

Mrs. S., a woman of 42, had bleeding from the rectum. She went to her local physician who said she had "caught cold in her bowels," prescribed some medication, and told her to return if the bleeding continued after she felt better. Off and on she noticed bleeding, and as she did not feel any better concluded that she still had the same cold. She continued to feel worse, and finally became too ill to return to the doctor for further medicine. Her husband went for her, and still the physician offered no other diagnosis than the cold in the bowels; did not suggest a rectal examination, and continued the medication, treating by remote control. After ten months of this, the woman was so fatigued and so anemic that her husband took her into a larger center for diagnosis, whereupon it was discovered that she had an inoperable carcinoma of the rectum. She died some months later after a palliative colostomy was done.

Mrs. T., aged 50, went to her physician stating that she had a lump in her breast about the size of a walnut. She wondered if it might be cancer. He advised her to wait for six months and see what happened; she followed his advice and returned in six months with lumps in the axilla as well. Again she was advised to "wait and see," and after six months, the axillary lumps had not disappeared, had in fact grown larger. The practitioner then advised her to go into a larger center for operation since "the lumps had now turned into cancer." She came and was found to have carcinoma of the breast with metastases. She was grateful to her physician that he had sent her to such a good hospital, and had recognized that it was cancer in time for her to have an operation.

Mr. U. had noticed blood in his urine eight months before admission to the hospital. He had at once consulted his physician, who said that he had "caught cold in his bladder." He too was treated with some sort of drug, and the bleeding stopped temporarily, was then intermittent for a period of time, and finally became rather constant. After eight months, the doctor advised him to go elsewhere for examination, and when he did he was found to have carcinoma of the bladder.

Mrs. V., aged 55, was ten years past the menopause. She noted a lump in her breast but was afraid to go to a physician who might tell her she had cancer. A month later she had bleeding from the uterus, and was relieved in her own mind that all was well because she was having a period of rejuvenation. I assured her that this was a greater danger signal still, and that the two symptoms of lump in the breast and bleeding from the uterus

might indicate a malignant growth in the ovaries. I urged her to go to a physician, as I myself was not licensed to practice in that State. She finally went, but the physician examined her only for cervical cancer and found nothing. She has been lost sight of, so the final outcome is in doubt, but the fact remains that she was not examined for the type of tumor which her symptoms indicated.

Miss X., aged 52, without any attempt to reduce, had lost 50 pounds in ten months. She consulted various doctors, some of them specialists in internal medicine, and not one of them suggested the possibility of cancer. Finally she was found to have cancer of the rectum, discovered almost by accident by one doctor whom she had seen.

Miss Y., age 17, was treated for mucous colitis, as was also her 19 year old sister. Her father had died of rectal cancer when they were small children of 8 and 10. She was treated for a period of five or six years, after which the family moved to another city and she came under the care of another physician. She was examined for rectal cancer and was found to have multiple polyposis with cancerous degeneration. Her sister was found to have the same disease. In the five year interval, a still older sister had died of rectal cancer. Both younger sisters were operated upon: the older of these two died some time later, and the younger is still alive, as far as is known. Both might have been operated upon at a stage before the cancer started had the significance of the symptoms been appreciated.

These are but a few of the stories which one picks up. Doubtless, not one of these practitioners would be aware of the fact that he had missed diagnosing cancer. These men would remain ignorant of their failures, or if the diagnosis was brought to their attention would probably excuse themselves by saying that it was not cancer when the patient had been in their care. These are not people whose cancers were being missed ten or twelve or twenty-five years ago; they are people whose cancers are being missed in the years of grace 1946 and 1947. Nor are the practitioners who are missing them necessarily those old men who were trained many years ago when cancer was not so important a cause of death as it is now. Many of those who are missing the diagnosis are men who have graduated in the last twenty years.

It is obvious, if cancer is causing the death of approximately one seventh of those who die past the age of 40, that the possibility of cancer being present should be one of the first things which a doctor should think of, when he meets a patient in that age range. Naturally he cannot examine for all types of cancer but breast and uterine cancers in women, and stomach and rectal cancer in both sexes are the commonest forms of malignant tumors, and the kinds which can be sought for without too much expensive equipment. It would seem that a doctor should think of, and exclude only on good negative evidence, these common types of cancer in all patients who come to him past the age of thirty-five.

It is not only that the physician is often missing the diagnosis of cancer when the patient has the disease, and presents symptoms which any alert practitioner should recognize at once; he often adopts a negligent attitude when a patient comes to him for examination for a possible cancer in a routine health check. One intelligent woman reported her experience to me and many women have told me the same story; namely, that they are treated as if they were neurotic patients by physicians to whom they go for examination, when they state that they have no symptoms of cancer but are coming merely for a routine check-up. This woman went to a well known cancer clinic, where "Come for early diagnosis" was a major slogan, and asked to be examined for possible breast and uterine cancer. When the man in charge found that she had no symptoms of either, and was merely coming to have a routine examination she was assured, (without there being any examination done) that she need have no fear, there was no reason for her to think she had cancer. She was patted on the back and talked to as if she were a hysterical child in need of quieting. She assured the doctor that she was not hysterical, that if she waited until she had the symptoms, the cancer must have been there for some time before, and that she wanted to have it found between the time when it was first recognizable by an examining expert and the time when it was evident through symptoms. She managed to have an examination before she left, but she had the feeling that the attending physician had branded her as emotionally unstable and verging upon a neurosis. Not until physicians take seriously the patients who come in for a routine check-up and gives them the same detailed examination which they should give to any patient coming to them for the first time with some illness, and are willing to look for the signs of early cancer, at least in all easily accessible sites, will patients be given the benefit of what is now known about cancer.

I recall a patient who had diabetes and had gone from doctor to doctor for a diet list before the days of insulin. She had a large scirrhous

carcinoma on the left breast that was visible to the naked eye. She had in the course of her doctor shopping visited at least a half dozen physicians who had each in turn given her a diet after confirming her statement that she had sugar in the urine, but not one of whom had ever examined her or discovered the breast cancer which had been present for some years. She finally arrived at the outpatient clinic at Johns Hopkins Hospital and was given a routine examination, at which time her cancer was discovered. She protested against the waste of time taken in examining her, she said that she knew she had diabetes, and wanted a more strict diet, as she was getting worse. No other doctor had ever bothered her with an examination but had always made her out a new diet sheet, when she told of her diabetes.

I hope that none of the doctors who read these words will be guilty of the faults herein described, but he who feels himself to be least guilty is probably the one who is in most need of heeding the warnings. Every doctor must become cancer conscious, and must think first of cancer, certainly in his patients past thirty-five, whether they give a history of suggestive symptoms or not. Every person giving even the most faintly suspicious symptoms should be thoroughly examined. While not every patient having cancer gives a history of unexplained weight loss, any person giving such a history of loss of weight which is not intentional should be suspected of having cancer, and every attempt made to ferret out the true diagnosis. It does not profit the public to come for early diagnosis if the medical profession is unable to recognize early cancer when they see it. Some of my readers will feel that I am setting up a man of straw only to knock him down again, but if they were to interview a large number of patients with cancer every month as I have to do, who have been in the hands of the general practitioners of our country, they would feel with me that the most urgent need at the present moment is not newer and better methods of diagnosis, desirable as they may be; nor newer and more efficient methods of treatment, essential as we all know these to be; but a medical profession which utilizes to the fullest extent what we now know of cancer diagnosis, and early recognition. It is true that the patients still come in too late, and for them we still need to keep up our educational campaign for the public; but it is also true that the profession as a whole cannot claim to be free of blame. Some of us are failing to see the obvious when it is presented to us, and losing valuable time for the patient by not making the diagnosis when it is handed to us almost as a foregone conclusion.

One might almost urge the slogan "Don't make a diagnosis until you have excluded cancer."

# A Report of Two Cases of Multiple Primary Neoplasms

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THE FREQUENCY OF THE occurrence of multiple primary carcinomata in the same patient is given by different authors as 3.9 to 6 per cent of all cancer cases. The true incidence of these multiple primary malignancies is obscured by several factors. Frequently, the physician fails to consider a possible second primary malignancy, attributing involvement of another site to metastasis from the original tumor. Also, there is the possibility that were patients to live sufficiently long after the occurrence of the first tumor, a second would develop in more instances. Likewise, the infrequency of autopsy is certainly a significant source of error in determining the true incidence of any disease.

The actual cause of multiple carcinomata is no clearer than is that of single tumors.

The criteria for terming a second malignancy discrete varies in detail with such investigators as Bilroth[10], Shields Warren and associates[11], Stalker, Phillips and Pemberton[12], and J. W. White[13]. Logical requirements are as follows: 1. Each

*The material for these case reports was taken from a Senior Class Section presentation by the following individuals: Ella Cooper Bell, M.D., Suzanne Butler, M.D., Marion Agnew Campbell, M.D., Margaret E. Densmore, M.D., Eleanor Roverud Izquierdo, M.D., Lovisa Margareta Jansen, M.D., Margaret Louise McClean, M.D., and Mary Marlene Schwab, M.D.

tumor must be histologically distinct. 2. Each tumor must present a definite picture of malignancy. 3. The possibility of one being a metastasis of the other must be excluded. 4. Macroscopically and microscopically, the lesions should be characteristic of the usual carcinomata encountered in the organs involved.

CASES: Within the past few years, two cases of multiple primary malignancy have come to the foreground in the gynecologic department at Woman's Medical College. One of these is purely gynecologic, being a combination of cervical and vulvar carcinoma; while the other, carcinoma of the cecum and of the cervix, is of surgical as well as gynecological interest. In both instances, the second growth presented sufficiently discrete characteristics to eliminate the possibility that it was a metastasis of the first.

**Case I:** A 57 year old colored woman was referred to the hospital in June 1943, because of vaginal bleeding and watery discharge, duration six months. Her menopause occurred at the age of 40, although her periods were irregular from the age of 32 on. Two months before admission, she began to have almost continuous "bearing down" pain across the abdomen. She was married at the age of 33, had had two miscarriages, but no other pregnancies, although no contraceptives were used.

The systemic review revealed palpitation, ankle edema, slight cough, and exceptional dyspnea. The patient had had a right mastectomy for a posttraumatic breast abscess at the age of 16, and an oöphorectomy for a left ovarian cyst at 32. Later, the patient admitted having had a "high blood sugar" for some years, for which she had been given a diet which had not been followed.

The admission physical examination revealed an obese colored female with black nevi over the bridge of the nose and cheeks. The teeth were in "horrible condition." The right breast was missing. Auscultation of the lungs showed bilateral roughness of the breath sounds in the bases. The heart was slightly enlarged with a systolic murmur audible over the entire precordium. Blood pressure was 180/108.

Pelvic examination showed distortion of the cervical outline, with an irregular eroding mass obscuring the entire area. The mass bled upon touch. The rectum barely admitted one finger. The laboratory reported a negative serology and 2 plus sugar in the urine. The blood sugar varied from 180 to 350 mg. per cent.

Treatment, instituted after standardization of the diabetes, consisted of 6,000 mg. hours of radium, intrauterine and contracervical in divided doses, and twelve treatments with 200 KV deep x-ray 300 r each. A cervical biopsy done at the time of radium implantation showed a basal cell cervical carcinoma. Two months after discharge from the hospital the patient attended the cancer follow-up clinic. There had been some recurrence of bleeding, and examination at that time showed a uterus slightly larger than would be expected. No pyometra was found and she was treated at this time with 1440 mg. hours of radium intra-uterine. Follow-up clinic visits disclosed no further symptoms or signs until January 1947, three and a half years after treatment for the cervical lesion, when the patient complained of "soreness" of the right labium. Examination revealed a nodular area 1 cm. wide, on the right labium minus near the introitus, with roughening but no bleeding. The patient was referred for biopsy. Grossly, the biopsy specimen was about the size of a dollar. Microscopically, the epithelium showed transitional stages from normal to hyperkeratosis, acanthosis, and neoplasm in the region of the tumor, which was ulcerated. Stratified squamous cells were pleomorphic; nuclei were large vesicular, with prominent nucleoli. Rete pegs were enlarged and elongated, and extended deep into the derma. There was no infiltration of deeper structures. The stroma was densely infiltrated with lymphocytes, plasma cells, and a few polymorphonuclear leucocytes. A pathological diagnosis of squamous cell carcinoma of the vulva, Grade 1, was made. The patient was contacted and scheduled for vulvectomy. However, she failed to appear on the scheduled date and a vulvectomy, radical stage 1, was finally done on May 15, 1947. Pathologic examination showed the same findings as in the biopsy and it was felt that the tumor was completely excised at operation. Because of the fact that this patient was an exceedingly poor operative risk, further observation will be made at follow-up clinic before additional treatment is contemplated.

**Case II:** A 60 year old white woman was admitted in May 1940, because of a "growth on the inside of privates for over one year." During this period, she also had had a small amount of bright bloody, painless vaginal discharge daily. The patient had suffered from "giddy spells," with headaches and morning nausea for one month. Menstrual history was normal and the menopause was uneventful at the age of 49. She had been married at 19, and had six children.

Systemic review revealed a moderate cough, exertional dyspnea, occasional nausea and postcibal distress, and episodes of tenderness in the left groin. The patient had one sister with diabetes mellitus and a goiter. Physical examination revealed an obese white woman with bad teeth. Heart and lungs were physiological; blood pressure was 122/80. Abdominal examination was negative.

Pelvic examination showed a small, retroverted uterus; the cervix was somewhat prolapsed and atrophic. There was an area of leukoplakia on the posterior lip to the right, which bled upon touch. Treatment consisted of cervical biopsy, Fothergill operation, and perineorrhaphy. When the cervical biopsy was reported positive for carcinoma, 500 mg. hours, intrauterine, and 1200 mg. hours, contracervical, radium was given in divided dosage. The microscopic examination showed atrophy of the surface epithelium of the cervix, which was atypical, normal cervical layers being absent. There was variation in cell size, nuclei were hyperchromatic. Within the stroma were small groups of epithelial cells in atypical arrangement. The pathological diagnosis was squamous cell carcinoma of the cervix. Two months following hospitalization, the patient was treated with additional radium so that the total dosage amounted to 4100 mg. hours. After this, she was well until June 1945, five years after the diagnosis of the first malignancy. She then complained of increased amount of purulent vaginal discharge and "dark" rectal bleeding, with episodes of diarrhea. A chest

x-ray and an upper gastro-intestinal series done at this time were negative. The patient did not submit herself to further examination. However, one and one-half years after this, because of persistently irregular bowel habits, diarrhea with occasional appearance of bright red blood, and practically continuous pain in both lower quadrants and back, further gastro-intestinal studies were done. The patient had lost twenty-one pounds in the previous eight weeks, and complained of anorexia and pain in both legs, worse at night. She had had two small, benign tumors removed from the rectum by a proctologist since her previous hospitalization. When the barium enema revealed a malignancy in the cecum, the terminal ileum, cecum, and colon were resected, the transverse colon being anastomosed to the ileum.

The pathological diagnosis was adenocarcinoma of the cecum, with metastasis to regional nodes. Grossly, the specimen showed an annular tumor, 2 cm. above the ileocecal valve, which completely encircled the bowel. It was 11 cm. in circumference, 6 cm. in breadth, and 1.4 cm. thick. Its surface was ulcerated; cut surface revealed colloid degeneration. The tumor had penetrated the bowel. Omental fat was riddled with metastatic tumor nodules. Microscopically, the edge of the tumor showed abrupt transition from normal colonic mucosa to irregular anaplastic glands, composed of pleomorphic, hyperchromic cells with irregular nuclei and cytoplasm distended with mucus. The tumor extended through all mucosal coats to the serosa. The lymph nodes sectioned were replaced by the same type of neoplastic cell.

These two cases present certain common features; both patients were women in the age found by Warren to be the most frequent for onset of symptoms from the first malignancy in patients who develop multiple carcinomata. Both had benign neoplastic lesions as well as the two malignant ones, the first patient having facial nevi and the second, presumably, rectal polyps. This should certainly support the theory of susceptibility to tumor formation.

In each, one finds evidence of endocrine dysfunction. The first patient had diabetes mellitus, and also a past history of an ovarian cyst. The second patient had a sister with diabetes and thyroid disease. Although these facts may be entirely irrelevant, their presence may be etiologically significant.

As for the results of therapy, these patients have had no difficulty for 4 and 7 years respectively after treatment of the first tumors. Insufficient time has elapsed since treatment of the second carcinomata for any statement. However, in the second case, since the stage of the cecal malignancy was advanced, the prognosis appears less favorable. Warren feels that the number of tumors is unrelated to the intensity of malignancy[11]. The results of therapy in Case I would tend to support this assumption, as would Holland's interesting case, in which the patient lived sufficiently long, ten years after treatment of the first malignancy, to develop three subsequent ones[6]. Hellendall, on the other hand, contends that the prognosis is less favorable in those patients than in those with singly occurring carcinoma.[5]. This question, like many others unsolved in the field of oncology, awaits further observations and studies.

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# The Present Incidence and Survival Picture in Cancer Among Females in Connecticut

## 1935-1946

**Eleanor J. Macdonald, A.B.**

THE AVAILABILITY OF accurate information about cancer as it pertains to any complete part of a population is dependent upon a number of factors. A registry of all cases, recorded in a uniform manner, is prerequisite to an effective established follow-up system. A follow-up system over a long period of time is a requirement if sound appraisal is to be attempted. Before either of these essentials can function there must be an alert medical profession, a conditioned public, and diagnostic and therapeutic resources. Finally, there has to be a research unit capable of tabulating and analyzing these factors. The State of Connecticut has had such a system evolving gradually from January 1, 1935. It was over 95 per cent complete by January 1947. By April 1947, tabulation of the facts contained in all the records in the registry was begun. This report will cover cancer among females in Connecticut during the twelve-year period beginning January 1, 1935, and ending December 31, 1946.

Records for females comprise 54 per cent of the total in the cancer registry; 20,458 females out of a total of 37,863 individuals. This is slightly higher than the proportion of females in this population of less than two million individuals. Table I gives the percentage distribution by site of cancer among females for twelve years. Breast cancer accounts for 25.3 per cent of all cancer among females. It is the largest single site in the registry. If all the abdominal cavity viscera were included under one heading, this group would account for 22.9 per cent of the total cancer recorded among females, and 27.9 per cent of the total in the registry. The abdominal cavity viscera include stomach, liver, gallbladder and ducts, pancreas, spleen; small intestine, large intestine, rectum, and anus, and would normally not be presented under one heading.

Cancer of the corpus uteri accounts for 7.7 per cent of the total incidence among females, of the cervix uteri for 11.1 per cent. The ovary is the primary site in 5.7 per cent of the total series. No primary site was discovered in 4.6 per cent of the total female cases.

Cancer occurs among females in Connecticut in sites normally considered accessible in nearly two-thirds of all cases. Every educational effort should be exerted toward the improvement of the prognosis of these types of cancer. A recent study measuring the changing reasons for delay, by certain sites of cancer, between 1938 and 1946 shows that this effort has begun and is making measurable progress.[1] Of individuals with cancer of the breast, 16.1 per cent in 1938 reported no delay. By 1946, this group had risen until it represented 45.6 per cent of the total cases. Inadequate medical advice was recorded as a reason for delay in 15 per cent of all cases of cancer of the breast in 1938. This percentage had dropped to 3.3 per cent of the total in 1946.

The two broad classifications which include cancers less favorable in end result, those of the chest cavity viscera and of the abdominal cavity viscera, represent 20.8 per cent of total cancer among females.

The cases and percentages of the microscopically proved cases among females are shown in columns three and four of Table I. The proportion so proved is 72.0 per cent for total skin, 83.2 per cent for total soft parts, 70.1 per cent for total bone, 64.7 per cent for brain, spinal cord and membranes, 86.8 per cent for upper respiratory and alimentary tracts, 82.0 per cent for eye,

thyroid, and other miscellaneous structures of the head and neck, 89.4 per cent for breast, 55.2 per cent for chest cavity viscera, 59.3 per cent for total abdominal cavity viscera, 78.9 per cent for urinary tract, 91.6 per cent for the female genital-tract, 95.2 per cent for the Hodgkin's and other lymphomas and leukemias, and 50.5 per cent for those with metastatic cancer for which no primary focus was discovered. Microscopic proof of cancer is present on 78.5 per cent of all records for females in the registry.

The average of seven years has been used to obtain the annual incidence rates of these sixty-nine anatomic subdivisions. In this way, the fluctuation of individual years is absorbed and a figure probably approaching the normal is obtained. To demonstrate the change in incidence from the average to a recent late year, the incidence rates for 1945 have been figured. The average incidence rates based on the years from 1940-1946 are given in column five of Table I and the 1945 rates in column six of the same table.

The median age of the total population of Connecticut in 1940 was 31.1 years, of California 33.0 years, of Delaware 30.6 years, of the District of Columbia 31.9 years, of Illinois 31.5 years, of Indiana 30.3 years, of Iowa 30.2 years, of Kansas 30.4 years, of Maryland 29.6 years, of Massachusetts 31.8 years, of Michigan 29.3 years, of Minnesota 29.5 years, of Missouri 31.1 years, of Nebraska 29.7 years, of Nevada 31.1 years, of New Hampshire 31.6 years, of New Jersey 31.3 years, of New York State 32.2 years, of Ohio 30.8 years, of Oregon 32.4 years, of Pennsylvania 29.1 years, of Rhode Island 30.7 years, of Vermont 29.9 years, of the State of Washington 32.2 years, and of Wisconsin 29.8 years. Until the experience of each State is known it is reasonable to assume that by applying these rates to other populations, an approximation of the size of the problem may be obtained, especially for the States with a median age close to that of Connecticut. The reported incidence of cancer of the skin in this series is probably lower than the actual incidence and would be the exception, and not applicable elsewhere.

In Connecticut, the seven year average annual incidence rate, or the number of individuals recognized for the first time as having cancer in a given year, is 221.2 per 100,000 females. The rate for 1945 was 259.5 per 100,000 females. By observation, it would appear from comparison of the incidence rates of a recent year with the average, that there has been a slight increase in cancers of the skin, bones, upper respiratory tract, thyroid, breast, chest cavity viscera, pancreas, small intestine, right large intestine, generalized large intestine, rectum, urinary tract, and uterus. A large increase is noted in the left large intestine which includes the transverse colon, splenic flexure, and descending and sigmoid colon. A slight decrease in the incidence rates was noted in cancer of the soft parts, brain, liver, and ovary, and in the group in which no primary site was discovered. The incidence rate of cancer of the stomach among females remains fairly constant.

Columns seven and eight of Table I give the survival rates per 100,000 population among females. These rates are based on the records of all females admitted to Connecticut general hospitals for treatment for cancer since January 1935, who were alive as of April 1, 1947. Column seven gives the total survival regardless of duration of life since treatment and reveals that 804.6 females out of every 100,000 females in the population of Connecticut in 1947 were known to the State cancer record registry as individuals with a history of cancer. Column eight gives the rates per 100,000 of females who had survived treatment for five or more years. Among the females in Connecticut's population in April 1947, were 220.1 out of every 100,000 who had survived treatment for cancer for five to twelve years. For every 100,000 women in Connecticut in April 1947, 60.6 had survived treatment for cancer of the breast for five to twelve years, 74.2 had survived treatment for cancer of the female genital tract for five to twelve years, and 29.2 had survived treatment for cancer of the skin for the same period of time.

One factor having an important bearing on the end results of cancer of all sites is that of age. The age at time of treatment of the microscopically proved cases of cancer among females for the total period from 1935 through 1946 is shown by site of cancer in Table II. These are the cases upon which the percentage distributions and average ages at time of treatment by site of cancer among females are found in Table III. The average age at time of treatment for this entire group is 55.4 years. The range of average ages at time of treatment is from 26.3 years to 69.2 years according to site of cancer. Among females, 23.8 per cent were 60 to 69 years of age, 12.6 per cent were from 70 to 79 and 2.7 per cent were over 80 at time of treatment. In some of the sites, over 30 per cent were over 70 at time of first

**Cancer Record Registry**
**Division of Cancer and Other Chronic Diseases**
**Connecticut State Department of Health**

## TABLE I

*Cancer Among Females*

| | 1935-1946 Percentage Distribution Cases | Per Cent | 1935-1946 Microscopically Proved Cases | Per Cent | 1940-1946 Incidence Rate Per 100,000 | 1945 Incidence Rate Per 100,000 | 1935-1946 Survival Rate Per 100,000 | 1935-1941 Survival Rate Per 100,000 |
|---|---|---|---|---|---|---|---|---|
| SKIN | | | | | | | | |
| Skin of Head and Neck | 1092 | 5.3 | 724 | 66.3 | 12.7 | 15.8 | 78.4 | 21.4 |
| Skin of Upper Extremities | 73 | .4 | 63 | 86.3 | .9 | .9 | 4.5 | 1.0 |
| Skin of Trunk | 214 | 1.0 | 187 | 87.4 | 2.2 | 2.0 | 11.9 | 4.3 |
| Skin of Lower Extremities | 90 | .4 | 83 | 92.2 | 1.1 | .9 | 6.1 | 1.8 |
| Skin (Generalized, multiple or location not specified) | 34 | .2 | 25 | 73.5 | .4 | .3 | 2.0 | .7 |
| TOTAL | 1503 | 7.3 | 1082 | 72.0 | 17.3 | 19.9 | 102.9 | 29.2 |
| SOFT PARTS | | | | | | | | |
| Soft Parts of Head and Neck | 39 | .2 | 32 | 82.1 | .5 | .5 | 1.9 | .9 |
| Soft Parts of Upper Extremities | 44 | .2 | 34 | 77.3 | .4 | .3 | 2.1 | 1.2 |
| Soft Parts of Trunk | 43 | .2 | 36 | 83.7 | .5 | .5 | 2.0 | .3 |
| Soft Parts of Lower Extremities | 60 | .3 | 52 | 86.7 | .6 | .6 | 3.6 | 1.0 |
| Soft Parts (Generalized, mutiple or location not specified) | 4 | .01 | 4 | 100.0 | .05 | — | .2 | .1 |
| TOTAL | 190 | .9 | 158 | 83.2 | 2.1 | 1.8 | 9.9 | 3.6 |
| SKELETAL SYSTEM | | | | | | | | |
| Skull (including tumors of dental origin) | 24 | .1 | 15 | 62.5 | .3 | .8 | 1.2 | .6 |
| Spine (excluding sacrum & coccyx) | 3 | .01 | — | — | .03 | .1 | .2 | — |
| Bones of Upper Extremities, Scapulae and Clavicles | 32 | .2 | 27 | 84.4 | .4 | .5 | 1.6 | .8 |
| Bones of Thorax (ribs, sternum) | 8 | .04 | 6 | 75.0 | .1 | .1 | .3 | — |
| Pelvis (including sacrum & coccyx) | 12 | .05 | 8 | 66.7 | .1 | .3 | .3 | .1 |
| Bones of Lower Extremities | 49 | .2 | 42 | 85.7 | .6 | .6 | 1.7 | .3 |
| Bones of Skeleton (Generalized, multiple or location not specified) | 36 | .2 | 17 | 47.2 | .4 | .5 | .6 | — |
| Joints and Synovial Membranes | 3 | .01 | 2 | 66.7 | .05 | .1 | — | — |
| TOTAL | 167 | .8 | 117 | 70.1 | 1.8 | 2.9 | 5.9 | 1.8 |
| CENTRAL NERVOUS SYSTEM | | | | | | | | |
| Brain and Membranes | 280 | 1.4 | 181 | 64.6 | 3.5 | 3.4 | 8.6 | 2.5 |
| Spinal Cord & Membranes | 29 | .1 | 19 | 65.5 | .4 | .3 | 1.3 | .4 |
| TOTAL | 309 | 1.5 | 200 | 64.7 | 3.9 | 3.7 | 10.0 | 2.9 |
| UPPER RESPIRATORY & ALIMENTARY TRACTS | | | | | | | | |
| Lip | 52 | .3 | 40 | 76.9 | .6 | .9 | 3.1 | .8 |
| Mucosa of Cheek | 14 | .07 | 13 | 92.9 | .2 | .2 | .4 | — |
| Gingiva (or gum) | 10 | .05 | 10 | 100.0 | .1 | .2 | .7 | .2 |
| Palate | 22 | .1 | 22 | 100.0 | .2 | .1 | 1.1 | .7 |
| Floor of Mouth | 2 | .009 | 2 | 100.0 | .02 | — | — | — |
| Tongue | 41 | .2 | 33 | 80.5 | .5 | .7 | 2.4 | .4 |
| Tonsil | 32 | .2 | 24 | 75.0 | .4 | .3 | 1.0 | .1 |
| Nasal Cavity | 7 | .03 | 5 | 71.4 | .07 | .2 | .2 | — |
| Nasopharynx | 14 | .07 | 14 | 100.0 | .2 | .1 | .3 | — |
| Pharyngeal Wall | 13 | .06 | 13 | 100.0 | .1 | .3 | .2 | — |
| Extrinsic Larynx | 22 | .1 | 22 | 100.0 | .2 | .5 | 1.2 | .3 |
| Intrinsic Larynx | 14 | .07 | 13 | 92.9 | .1 | .3 | .4 | — |
| Paranasal Sinuses | 32 | .2 | 27 | 84.4 | .3 | .3 | .7 | .2 |
| Oral Mucous Membranes or Mouth Cavity (Generalized, multiple or location not specified) | 44 | .2 | 39 | 88.6 | .5 | .6 | 2.0 | .6 |
| TOTAL | 319 | 1.6 | 277 | 86.8 | 3.7 | 4.9 | 13.9 | 3.4 |

| | 1935-1946 Percentage Distribution Cases | Per Cent | 1935-1946 Microscopically Proved Cases | Per Cent | 1940-1946 Incidence Rate Per 100,000 | 1945 Incidence Rate Per 100,000 | 1935-1946 Survival Rate Per 100,000 | 1935-1941 Survival Rate Per 100,000 |
|---|---|---|---|---|---|---|---|---|
| MISCELLANEOUS STRUCTURES OF HEAD & NECK | | | | | | | | |
| Eye, Orbital Cavity & Conjunctivae | 66 | .3 | 56 | 84.8 | .7 | .8 | 3.3 | .8 |
| Mastoid Cells and Middle & Inner Ear | 9 | .05 | 8 | 88.9 | .1 | .2 | .3 | — |
| Salivary Glands | 165 | .8 | 135 | 81.8 | 1.9 | 2.8 | 12.8 | 4.3 |
| Thyroid & Parathyroid | 121 | .6 | 97 | 80.2 | 1.4 | 2.4 | 6.6 | 2.2 |
| TOTAL | 361 | 1.8 | 296 | 82.0 | 4.2 | 6.2 | 23.0 | 7.3 |
| BREAST | | | | | | | | |
| Breast | 5148 | 25.1 | 4603 | 89.4 | 62.3 | 67.5 | 239.6 | 59.5 |
| Nipple | 31 | .2 | 28 | 90.3 | .3 | .1 | 2.0 | 1.1 |
| TOTAL | 5179 | 25.3 | 4631 | 89.4 | 62.6 | 67.6 | 241.6 | 60.6 |
| CHEST CAVITY VISCERA | | | | | | | | |
| Trachea, Bronchial Tree & Lungs | 262 | 1.3 | 143 | 54.6 | 2.7 | 2.6 | 4.2 | .8 |
| Heart, Pericardium & Aorta | — | — | — | — | — | — | — | — |
| Esophagus | 110 | .5 | 63 | 57.3 | 1.3 | 1.7 | .8 | — |
| Mediastinum | 19 | .09 | 10 | 52.6 | .2 | .8 | .8 | — |
| TOTAL | 391 | 1.9 | 216 | 55.2 | 4.2 | 5.1 | 5.7 | .8 |
| ABDOMINAL CAVITY VISCERA | | | | | | | | |
| Diaphragm, Peritoneum, Mesentery and Unclassified Abdominal Tumors | 115 | .6 | 74 | 64.3 | 1.3 | 2.3 | 1.9 | .1 |
| Stomach | 1025 | 5.0 | 401 | 39.1 | 10.7 | 10.9 | 14.2 | 2.1 |
| Liver, Gallbladder & Ducts | 353 | 1.7 | 235 | 66.6 | 3.7 | 3.2 | 2.8 | .6 |
| Pancreas | 318 | 1.6 | 124 | 39.0 | 3.6 | 5.3 | 4.3 | .7 |
| Spleen | 3 | .01 | 1 | 33.3 | .1 | .1 | .1 | — |
| Small Intestine | 51 | .2 | 28 | 54.9 | .7 | 1.4 | 1.5 | .6 |
| Large Intestine, Right | 508 | 2.5 | 357 | 70.3 | 5.7 | 8.2 | 17.7 | 4.3 |
| Large Intestine, Left | 1227 | 6.0 | 792 | 64.5 | 13.3 | 32.4 | 36.3 | 8.1 |
| Large Intestine (Generalized, multiple or location not specified) | 282 | 1.4 | 172 | 61.0 | 3.3 | 4.9 | 8.4 | 1.7 |
| Rectum | 792 | 3.9 | 585 | 73.9 | 8.6 | 9.3 | 26.1 | 6.4 |
| Anus | 15 | .07 | 11 | 73.3 | .2 | .2 | 1.2 | .1 |
| TOTAL | 4689 | 22.9 | 2780 | 59.3 | 51.1 | 61.9 | 114.5 | 25.6 |
| URINARY TRACTS | | | | | | | | |
| Kidney | 198 | 1.0 | 137 | 69.2 | 2.1 | 3.3 | 6.1 | 1.3 |
| Adrenal | 12 | .05 | 8 | 66.7 | 1.0 | .1 | .2 | — |
| Ureter | 2 | .009 | — | — | — | — | — | — |
| Urinary Bladder | 330 | 1.6 | 281 | 85.2 | 3.5 | 4.3 | 12.9 | 3.4 |
| Urethra | 21 | .1 | 18 | 85.7 | .3 | .5 | 1.0 | .2 |
| TOTAL | 563 | 2.8 | 444 | 78.9 | 5.9 | 8.2 | 20.2 | 4.9 |
| GENITAL TRACT AND EXTERNAL GENITALIA | | | | | | | | |
| Corpus of Uterus | 1577 | 7.7 | 1401 | 88.8 | 17.1 | 20.0 | 83.1 | 26.4 |
| Cervix of Uterus | 2267 | 11.1 | 2130 | 94.0 | 23.0 | 27.9 | 101.2 | 35.0 |
| Ovaries | 1173 | 5.7 | 1067 | 91.0 | 11.8 | 9.9 | 34.5 | 11.3 |
| Fallopian Tubes | 16 | .07 | 15 | 93.8 | .2 | — | .4 | .1 |
| Vagina | 87 | .4 | 77 | 88.5 | .9 | .6 | 3.0 | 1.0 |
| Labia Minora & Clitoris | 35 | .2 | 32 | 91.4 | .4 | .7 | 1.5 | .3 |
| TOTAL | 5155 | 25.2 | 4722 | 91.6 | 53.4 | 59.2 | 223.6 | 74.2 |
| SYSTEMIC DISEASES | | | | | | | | |
| TOTAL | 693 | 3.4 | 660 | 95.2 | 7.9 | 9.1 | 17.3 | 3.3 |
| METASTATIC CANCER (GENERALIZED) NO PRIMARY DISCOVERED | | | | | | | | |
| TOTAL | 939 | 4.6 | 474 | 50.5 | 9.9 | 8.9 | 15.8 | 3.3 |
| GRAND TOTAL | 20,458 | 100.0 | 16,057 | 78.5 | 221.2 | 259.5 | 804.6 | 220.1 |

*The Nomenclature used is the Nomenclature of Diagnoses of Memorial Hospital for the Treatment of Cancer and Allied Diseases, New York City.*

Cancer Record Registry
Division of Cancer and Other Chronic Diseases
Connecticut State Department of Health

## TABLE II

*Age Distribution of Patients With Microscopically Proved Cancer By Site*

1935-1946

FEMALES

| | 0-9 | 10-19 | 20-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80+ | Unknown | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SKIN | | | | | | | | | | | |
| Skin of Head and Neck | 2 | 1 | 16 | 39 | 82 | 123 | 169 | 190 | 67 | 35 | 724 |
| Skin of Upper Extremities | — | 2 | 2 | 6 | 6 | 14 | 17 | 10 | 5 | 1 | 63 |
| Skin of Trunk | 3 | 5 | 7 | 11 | 22 | 32 | 44 | 44 | 16 | 3 | 187 |
| Skin of Lower Extremeties | — | 4 | 5 | 8 | 16 | 17 | 20 | 10 | 1 | 2 | 83 |
| Skin (Generalized, multiple or location not specified) | 3 | 2 | — | 2 | 1 | 5 | 7 | 4 | 1 | — | 25 |
| TOTAL | 8 | 14 | 30 | 66 | 127 | 191 | 257 | 258 | 90 | 41 | 1082 |
| SOFT PARTS | | | | | | | | | | | |
| Soft Parts of Head and Neck | 3 | 1 | 1 | 4 | 6 | 7 | 6 | 3 | — | 1 | 32 |
| Soft Parts of Upper Extremities | 1 | 1 | 2 | 5 | 5 | 7 | 7 | 6 | — | — | 34 |
| Soft Parts of Trunk | — | 1 | 3 | 8 | 7 | 4 | 7 | 6 | — | — | 36 |
| Soft Parts of Lower Extremities | 1 | — | 5 | 5 | 15 | 12 | 9 | 4 | 1 | — | 52 |
| Soft Parts (Generalized, multiple or location not specified) | — | — | 1 | 1 | — | 1 | 1 | — | — | — | 4 |
| TOTAL | 5 | 3 | 12 | 23 | 33 | 31 | 30 | 19 | 1 | 1 | 158 |
| SKELETAL SYSTEM | | | | | | | | | | | |
| Skull (including tumors of dental origin) | — | 3 | 4 | 1 | 1 | 1 | 3 | — | 1 | 1 | 15 |
| Spine (excluding sacrum & coccyx) | — | — | — | — | — | — | — | — | — | — | — |
| Bones of Upper Extremities (Scapulae and Clavicles) | 1 | 2 | 4 | 1 | 3 | 6 | 6 | 1 | 3 | — | 27 |
| Bones of Thorax (ribs, sternum) | — | 2 | 1 | — | 1 | 2 | — | — | — | — | 6 |
| Bones of Lower Extremities | 1 | 15 | 5 | 5 | 2 | 3 | 8 | 2 | — | 1 | 42 |
| Bones of Skeleton (Generalized multiple or location not specified) | 1 | — | — | 1 | 2 | 8 | 4 | 1 | — | — | 17 |
| Pelvis (including sacrum & coccyx) | — | 2 | — | 2 | 1 | 2 | 1 | — | — | — | 8 |
| Joints & Synnovial Membranes | — | — | — | — | — | — | 2 | — | — | — | 2 |
| TOTAL | 3 | 24 | 14 | 10 | 10 | 22 | 24 | 4 | 4 | 2 | 117 |
| CENTRAL NERVOUS SYSTEM | | | | | | | | | | | |
| Brain and Membranes | 15 | 8 | 17 | 24 | 43 | 53 | 15 | 4 | — | 2 | 181 |
| Spinal Cord and Membranes | — | — | 2 | 5 | 3 | 3 | 5 | 1 | — | — | 19 |
| TOTAL | 15 | 8 | 19 | 29 | 46 | 56 | 20 | 5 | — | 2 | 200 |
| UPPER RESPIRATORY & ALIMENTARY TRACTS | | | | | | | | | | | |
| Lip | — | — | — | 2 | 3 | 10 | 13 | 8 | 2 | 2 | 40 |
| Mucosa of Cheek | — | — | — | — | 1 | 2 | 2 | 5 | 2 | 1 | 13 |
| Gingiva (or gum) | — | — | — | — | 1 | 2 | 5 | 2 | — | — | 10 |
| Palate | — | — | 1 | 1 | 1 | 7 | 1 | 7 | 3 | 1 | 22 |
| Floor of Mouth | — | — | — | — | — | 1 | — | — | 1 | — | 2 |
| Tongue | — | — | 3 | 2 | 5 | 8 | 5 | 6 | 3 | 1 | 33 |
| Tonsil | — | — | 1 | 2 | — | 3 | 13 | 4 | 1 | — | 24 |
| Nasal Cavity | — | — | — | — | — | 1 | 2 | 1 | 1 | — | 5 |
| Nasopharynx | — | — | — | 3 | 3 | 3 | 5 | — | — | — | 14 |
| Pharyngeal Wall | — | 1 | — | — | 2 | 6 | 3 | 1 | — | — | 13 |
| Extrinsic Larynx | — | — | — | 2 | 4 | 6 | 7 | 2 | 1 | — | 22 |
| Intrinsic Larynx | — | — | 1 | — | 3 | 2 | 4 | 1 | 1 | 1 | 13 |
| Paranasal Sinuses | — | 1 | — | 1 | 4 | 8 | 7 | 3 | 1 | 2 | 27 |
| Oral Mucous Membranes or Mouth Cavity (Generalized, multiple or location not specified) | 1 | — | — | 6 | 5 | 7 | 7 | 13 | — | — | 39 |
| TOTAL | 1 | 2 | 6 | 19 | 32 | 66 | 74 | 53 | 16 | 8 | 277 |
| MISCELLANEOUS STRUCTURES OF HEAD & NECK | | | | | | | | | | | |
| Eye, Orbital Cavity & Conjunctivae | 2 | 1 | — | 5 | 5 | 17 | 12 | 6 | 6 | 2 | 56 |
| Mastoid Cells & Middle & Inner Ear | — | — | — | 1 | 2 | 1 | — | 4 | — | — | 8 |
| Salivary Glands | — | 5 | 22 | 20 | 30 | 26 | 20 | 7 | 2 | 3 | 135 |
| Thyroid & Parathyroid | — | 3 | 5 | 15 | 19 | 17 | 16 | 17 | 2 | 3 | 97 |
| TOTAL | 2 | 9 | 27 | 41 | 56 | 61 | 48 | 34 | 10 | 8 | 296 |

| | 0-9 | 10-19 | 20-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-+ | Unknown | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BREAST | | | | | | | | | | | |
| Breast | — | 5 | 72 | 414 | 1137 | 1136 | 1108 | 548 | 124 | 59 | 4603 |
| Nipple | — | — | — | — | 7 | 8 | 8 | 5 | — | — | 28 |
| TOTAL | — | 5 | 72 | 414 | 1144 | 1144 | 1116 | 553 | 124 | 59 | 4631 |
| CHEST CAVITY VISCERA | | | | | | | | | | | |
| Trachea, Bronchial Tree & Lungs | — | — | 2 | 13 | 36 | 33 | 34 | 17 | 6 | 2 | 143 |
| Heart, Pericardium & Aorta | — | — | — | — | — | — | — | — | — | — | — |
| Esophagus | — | — | — | — | 4 | 20 | 20 | 18 | 1 | — | 63 |
| Mediastinum | 1 | 1 | 1 | 1 | 1 | 2 | 2 | — | — | 1 | 10 |
| TOTAL | 1 | 1 | 3 | 14 | 41 | 55 | 56 | 35 | 7 | 3 | 216 |
| ABDOMINAL CAVITY VISCERA | | | | | | | | | | | |
| Diaphragm, Peritoneum, Mesentery and Unclassified Abdominal Tumors | 3 | 1 | 3 | 7 | 14 | 20 | 16 | 9 | — | 1 | 74 |
| Stomach | 1 | — | 8 | 25 | 46 | 105 | 131 | 69 | 9 | 7 | 401 |
| Liver, Gall Bladder & Ducts | 1 | — | 3 | 9 | 21 | 70 | 73 | 49 | 5 | 4 | 235 |
| Pancreas | 1 | — | 2 | 2 | 12 | 35 | 40 | 27 | 4 | 1 | 124 |
| Spleen | — | — | — | — | — | — | — | — | — | 1 | 1 |
| Small Intestine | — | — | 1 | 6 | 2 | 5 | 10 | 4 | — | — | 28 |
| Large Intestine—Right | — | 16 | 12 | 31 | 54 | 72 | 99 | 60 | 10 | 3 | 357 |
| Large Intestine—Left | — | 1 | 15 | 30 | 146 | 223 | 210 | 136 | 26 | 5 | 792 |
| Large Intestine (Generalized, multiple or location not specified) | — | 1 | 4 | 16 | 32 | 43 | 46 | 23 | 7 | — | 172 |
| Rectum | — | 2 | 10 | 37 | 104 | 171 | 156 | 90 | 13 | 2 | 585 |
| Anus | — | — | — | 2 | 3 | 2 | 3 | — | — | 1 | 11 |
| TOTAL | 6 | 21 | 58 | 165 | 434 | 746 | 784 | 467 | 74 | 25 | 2780 |
| URINARY TRACTS | | | | | | | | | | | |
| Kidney | 14 | 1 | 1 | 7 | 24 | 41 | 38 | 7 | 2 | 2 | 137 |
| Adrenal | 4 | 1 | — | 1 | — | — | 1 | 1 | — | — | 8 |
| Ureter | — | — | — | — | — | — | — | — | — | — | — |
| Urinary Bladder | — | — | 2 | 9 | 22 | 62 | 87 | 73 | 26 | — | 281 |
| Urethra | — | — | 1 | — | 2 | 5 | 4 | 3 | 3 | — | 18 |
| TOTAL | 18 | 2 | 4 | 17 | 48 | 108 | 130 | 84 | 31 | 2 | 444 |
| GENITAL TRACT AND EXTERNAL GENITALIA | | | | | | | | | | | |
| Corpus of Uterus | — | 2 | 30 | 67 | 254 | 450 | 402 | 160 | 27 | 9 | 1401 |
| Cervix of Uterus | — | 3 | 48 | 307 | 632 | 619 | 361 | 131 | 114 | 15 | 2130 |
| Ovaries | — | 17 | 51 | 110 | 259 | 325 | 219 | 67 | 12 | 7 | 1067 |
| Fallopian Tubes | — | — | — | — | 2 | 10 | 2 | 1 | — | — | 15 |
| Vagina | — | 1 | 1 | 4 | 16 | 17 | 17 | 14 | 7 | — | 77 |
| Labia Minora & Clitoris | — | — | — | 1 | 2 | 4 | 13 | 10 | 2 | — | 32 |
| TOTAL | — | 23 | 130 | 489 | 1165 | 1425 | 1014 | 383 | 62 | 31 | 4722 |
| SYSTEMIC DISEASES | | | | | | | | | | | |
| Hodgkin's Disease | — | 18 | 30 | 32 | 29 | 32 | 30 | 12 | 1 | 1 | 185 |
| Acute Leukemia | 9 | 4 | 3 | 4 | 2 | 7 | 1 | 4 | — | 1 | 35 |
| Myelogenous Leukemia | 14 | 9 | 10 | 20 | 15 | 27 | 21 | 14 | 2 | — | 132 |
| Chronic Lymphatic Leukemia | 25 | 16 | 3 | 3 | 10 | 28 | 26 | 19 | — | 2 | 132 |
| Lymphoblastoma | 2 | 2 | 3 | 2 | 10 | 11 | 12 | 6 | 1 | — | 49 |
| Lymphosarcoma | 3 | 2 | 10 | 8 | 12 | 12 | 23 | 7 | 1 | 1 | 79 |
| Reticulum Cell Sarcoma | — | — | — | 1 | 2 | 2 | 8 | 5 | — | — | 18 |
| Monocytic Leukemia | — | — | 1 | — | — | 4 | — | 2 | — | — | 7 |
| Others | 2 | 3 | — | 2 | 1 | 3 | 3 | 5 | — | — | 19 |
| Mycosis Fungoides | — | 1 | — | — | — | 2 | — | 1 | — | — | 4 |
| TOTAL | 55 | 55 | 60 | 72 | 81 | 128 | 124 | 75 | 5 | 5 | 660 |
| METASTATIC CANCER (GENERALIZED) NO PRIMARY DISCOVERED | | | | | | | | | | | |
| TOTAL | 2 | 8 | 8 | 31 | 76 | 124 | 146 | 59 | 14 | 6 | 474 |
| GRAND TOTAL | 116 | 175 | 443 | 1390 | 3293 | 4157 | 3823 | 2029 | 438 | 193 | 16,057 |

*The Nomenclature used is the Nomenclature of Diagnoses of the Memorial Hospital for the Treatment of Cancer and Allied Diseases, New York.*

Cancer Record Registry
Division of Cancer and Other Chronic Diseases
Connecticut State Department of Health

## TABLE III

*Percentage Distribution of Cancer By Age**
1935-1946

### FEMALES

| | 0-5 | 10-15 | 20-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80+ | Unknown | Total | Average Age at Time of Treatment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SKIN | | | | | | | | | | | | |
| Skin of Head and Neck | .3 | .2 | 2.2 | 5.4 | 11.3 | 17.0 | 23.3 | 26.2 | 9.3 | 4.8 | 100.0 | 62.7 |
| Skin of Upper Extremities | — | 3.2 | 3.2 | 9.5 | 9.5 | 22.2 | 27.0 | 15.8 | 8.0 | 1.6 | 100.0 | 57.9 |
| Skin of Trunk | 1.6 | 2.7 | 3.7 | 5.9 | 11.8 | 17.1 | 23.5 | 23.5 | 8.6 | 1.6 | 100.0 | 59.3 |
| Skin of Lower Extremities | — | 4.8 | 6.0 | 9.6 | 19.3 | 20.5 | 24.1 | 12.1 | 1.2 | 2.4 | 100.0 | 46.4 |
| Skin (Generalized, multiple or location not specified) | 12.0 | 8.0 | — | 8.0 | 4.0 | 20.0 | 28.0 | 16.0 | 4.0 | — | 100.0 | 51.0 |
| TOTAL | .7 | 1.3 | 2.8 | 6.1 | 11.7 | 17.7 | 23.8 | 23.8 | 8.3 | 3.8 | 100.0 | 60.7 |
| SOFT PARTS | | | | | | | | | | | | |
| Soft Parts of Head and Neck | 9.4 | 3.1 | 3.1 | 12.5 | 18.8 | 21.8 | 18.8 | 9.4 | — | 3.1 | 100.0 | 45.8 |
| Soft Parts of Upper Extremities | 3.0 | 3.0 | 5.8 | 14.7 | 14.7 | 20.6 | 20.6 | 17.6 | — | — | 100.0 | 51.8 |
| Soft Parts of Trunk | — | 2.8 | 8.4 | 22.2 | 19.4 | 11.1 | 19.4 | 16.7 | — | — | 100.0 | 50.3 |
| Soft Parts of Lower Extremities | 1.9 | — | 9.6 | 9.6 | 28.9 | 23.1 | 17.3 | 7.7 | 1.9 | — | 100.0 | 50.2 |
| Soft Parts (Generalized, multiple or location not specified) | — | — | 25.0 | 25.0 | — | 25.0 | 25.0 | — | — | — | 100.0 | 42.5 |
| TOTAL | 3.2 | 1.9 | 7.6 | 14.6 | 20.9 | 19.6 | 19.0 | 12.0 | .6 | .6 | 100.0 | 49.8 |
| SKELETAL SYSTEM | | | | | | | | | | | | |
| Skull (including tumors of dental origin) | — | 19.9 | 26.7 | 6.7 | 6.7 | 6.7 | 19.9 | — | 6.7 | 6.7 | 100.0 | 40.0 |
| Bones of Upper Extremities, Scapulae & Clavicles | 3.7 | 7.5 | 14.8 | 3.7 | 11.1 | 22.2 | 22.2 | 3.7 | 11.1 | — | 100.0 | 50.2 |
| Bones of Thorax (ribs, sternum) | — | 33.3 | 16.7 | — | 16.7 | 33.3 | — | — | — | — | 100.0 | 35.0 |
| Pelvis (including sacrum & coccyx) | — | 25.0 | — | 25.0 | 12.5 | 25.0 | 12.5 | — | — | — | 100.0 | 40.0 |
| Bones of Lower Extremities | 2.4 | 35.7 | 11.9 | 11.9 | 4.8 | 7.1 | 19.0 | 4.8 | — | 2.4 | 100.0 | 35.5 |
| Bones of Skeleton (Generalized, multiple or location not specified) | 5.9 | — | — | 5.9 | 11.8 | 47.0 | 23.5 | 5.9 | — | — | 100.0 | 53.2 |
| Joints and Synovial Membranes | — | — | — | — | — | — | 100.0 | — | — | — | 100.0 | 65.0 |
| TOTAL | 2.6 | 20.5 | 12.0 | 8.5 | 8.5 | 18.8 | 20.5 | 3.4 | 3.4 | 1.8 | 100.0 | 42.9 |
| CENTRAL NERVOUS SYSTEM | | | | | | | | | | | | |
| Brain and Membranes | 8.3 | 4.4 | 9.4 | 13.3 | 23.7 | 29.3 | 8.3 | 2.2 | — | 1.1 | 100.0 | 42.4 |
| Spinal Cord and Membranes | — | — | 10.5 | 26.3 | 15.8 | 15.8 | 26.3 | 5.3 | — | — | 100.0 | 48.7 |
| TOTAL | 7.5 | 4.0 | 9.5 | 14.5 | 23.0 | 28.0 | 10.0 | 2.5 | — | 1.0 | 100.0 | 43.0 |
| UPPER RESPIRATORY AND ALIMENTARY TRACTS | | | | | | | | | | | | |
| Lip | — | — | — | 5.0 | 7.5 | 25.0 | 32.5 | 20.0 | 5.0 | 5.0 | 100.0 | 62.4 |
| Mucosa of Cheek | — | — | — | — | 7.7 | 15.4 | 15.4 | 38.4 | 15.4 | 7.7 | 100.0 | 69.2 |
| Gingiva (or gum) | — | — | — | — | 10.0 | 20.0 | 50.0 | 20.0 | — | — | 100.0 | 63.0 |
| Palate | — | — | 4.5 | 4.5 | 4.5 | 31.9 | 4.5 | 31.9 | 13.7 | 4.5 | 100.0 | 63.6 |
| Floor of Mouth | — | — | — | — | — | 50.0 | — | — | 50.0 | — | 100.0 | 70.0 |
| Tongue | — | — | 9.1 | 6.0 | 15.2 | 24.2 | 15.2 | 18.2 | 9.1 | 3.0 | 100.0 | 57.5 |
| Tonsil | — | — | 4.2 | 8.3 | — | 12.5 | 54.1 | 16.7 | 4.2 | — | 100.0 | 62.1 |
| Nasal Cavity | — | — | — | — | — | 20.0 | 40.0 | 20.0 | 20.0 | — | 100.0 | 69.0 |
| Nasopharynx | — | — | — | 21.4 | 21.4 | 21.4 | 35.8 | — | — | — | 100.0 | 52.1 |
| Pharyngeal Wall | — | 7.7 | — | — | 15.4 | 46.1 | 23.1 | 7.7 | — | — | 100.0 | 54.2 |
| Extrinsic Larynx | — | — | — | 9.1 | 18.2 | 27.3 | 31.8 | 9.1 | 4.5 | — | 100.0 | 57.7 |
| Intrinsic Larynx | — | — | 7.7 | — | 23.1 | 15.4 | 30.7 | 7.7 | 7.7 | 7.7 | 100.0 | 57.5 |
| Paranasal Sinuses | — | 3.7 | — | 3.7 | 14.8 | 29.7 | 25.9 | 11.1 | 3.7 | 7.4 | 100.0 | 57.4 |
| Oral Mucous Membranes or Mouth Cavity (Generalized, multiple or location not specified) | 2.6 | — | — | 15.4 | 12.8 | 17.9 | 17.9 | 33.4 | — | — | 100.0 | 57.8 |
| TOTAL | .4 | .7 | 2.2 | 6.9 | 11.5 | 23.8 | 26.7 | 19.1 | 5.8 | 2.9 | 100.0 | 59.7 |
| MISCELLANEOUS STRUCTURES OF HEAD AND NECK | | | | | | | | | | | | |
| Eye, Orbital Cavity & Conjunctivae | 3.6 | 1.8 | — | 8.9 | 8.9 | 30.4 | 21.4 | 10.7 | 10.7 | 3.6 | 100.0 | 57.4 |
| Mastoid Cells & Middle & Inner Ear | — | — | — | 12.5 | 25.0 | 12.5 | — | 50.0 | — | — | 100.0 | 60.0 |
| Salivary Glands | — | 3.7 | 16.3 | 14.8 | 22.2 | 19.3 | 14.8 | 5.2 | 1.5 | 2.2 | 100.0 | 45.7 |
| Thyroid and Parathyroid | — | 3.1 | 5.1 | 15.5 | 19.6 | 17.5 | 16.5 | 17.5 | 2.1 | 3.1 | 100.0 | 52.9 |
| TOTAL | .7 | 3.0 | 9.1 | 13.9 | 18.9 | 20.6 | 16.2 | 11.5 | 3.4 | 2.7 | 100.0 | 50.9 |

**Microscopically Proved Cases*

| | 0-9 | 10-19 | 20-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80+ | Unknown | Total | Average Age at Time of Treatment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BREAST | | | | | | | | | | | | |
| Breast | — | .1 | 1.6 | 9.0 | 24.7 | 24.6 | 24.1 | 11.9 | 2.7 | 1.3 | 100.0 | 55.8 |
| Nipple | — | — | — | — | 25.0 | 28.6 | 28.6 | 17.8 | — | — | 100.0 | 58.9 |
| TOTAL | — | .1 | 1.6 | 8.9 | 24.7 | 24.7 | 24.1 | 11.9 | 2.7 | 1.3 | 100.0 | 55.8 |
| CHEST CAVITY VISCERA | | | | | | | | | | | | |
| Trachea, Bronchial Tree & Lungs | — | — | 1.4 | 9.1 | 25.1 | 23.1 | 23.8 | 11.9 | 4.2 | 1.4 | 100.0 | 56.3 |
| Heart, Pericardium & Aorta | — | — | — | — | — | — | — | — | — | — | — | — |
| Esophagus | — | — | — | — | 6.4 | 31.7 | 31.7 | 28.6 | 1.6 | — | 100.0 | 63.7 |
| Mediastinum | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 20.0 | 20.0 | — | — | 10.0 | 100.0 | 40.6 |
| TOTAL | .5 | .5 | 1.4 | 6.5 | 19.0 | 25.4 | 25.9 | 16.2 | 3.2 | 1.4 | 100.0 | 57.8 |
| ABDOMINAL CAVITY VISCERA | | | | | | | | | | | | |
| Diaphragm, Peritoneum, Mesentery & Unclassified Abdominal Tumors | 4.0 | 1.4 | 4.0 | 9.5 | 18.9 | 27.0 | 21.6 | 12.2 | — | 1.4 | 100.0 | 51.9 |
| Stomach | .3 | — | 2.0 | 6.2 | 11.5 | 26.2 | 32.7 | 17.2 | 2.2 | 1.7 | 100.0 | 59.4 |
| Liver, Gallbladder & Ducts | .4 | — | 1.3 | 3.8 | 8.9 | 29.8 | 31.1 | 20.9 | 2.1 | 1.7 | 100.0 | 60.8 |
| Pancreas | .8 | — | 1.6 | 1.6 | 9.7 | 28.2 | 32.3 | 21.8 | 3.2 | .8 | 100.0 | 61.4 |
| Spleen | — | — | — | — | — | — | — | — | — | — | — | — |
| Small Intestine | — | — | 3.6 | 21.4 | 7.1 | 17.9 | 35.7 | 14.3 | — | — | 100.0 | 55.4 |
| Large Intestine—Right | — | 4.5 | 3.4 | 8.7 | 15.1 | 20.2 | 27.7 | 16.8 | 2.8 | .8 | 100.0 | 55.8 |
| Large Intestine—Left | — | .1 | 1.9 | 3.8 | 18.4 | 28.2 | 26.5 | 17.2 | 3.3 | .6 | 100.0 | 58.9 |
| Large Intestine (Generalized, multiple or location not specified) | — | .6 | 2.3 | 9.3 | 18.6 | 25.0 | 26.7 | 13.4 | 4.1 | — | 100.0 | 56.9 |
| Rectum | — | .3 | 1.7 | 6.3 | 17.8 | 29.3 | 26.7 | 15.4 | 2.2 | .3 | 100.0 | 57.7 |
| Anus | — | — | — | 18.2 | 27.3 | 18.2 | 27.3 | — | — | 9.0 | 100.0 | 51.0 |
| TOTAL | .2 | .8 | 2.1 | 5.9 | 15.6 | 26.8 | 28.2 | 16.8 | 2.7 | .9 | 100.0 | 58.2 |
| URINARY TRACT | | | | | | | | | | | | |
| Kidney | 10.2 | .7 | .7 | 5.1 | 17.5 | 29.9 | 27.8 | 5.1 | 1.5 | 1.5 | 100.0 | 50.8 |
| Adrenal | 50.0 | 12.5 | — | 12.5 | — | — | 12.5 | 12.5 | — | — | 100.0 | 26.3 |
| Ureter | — | — | — | — | — | — | — | — | — | — | — | — |
| Urinary Bladder | — | — | .7 | 3.2 | 7.8 | 22.1 | 31.0 | 26.0 | 9.2 | — | 100.0 | 64.4 |
| Urethra | — | — | 5.5 | — | 11.1 | 27.8 | 22.2 | 16.7 | 16.7 | — | 100.0 | 62.8 |
| TOTAL | 4.0 | .5 | .9 | 3.8 | 10.8 | 24.3 | 29.3 | 18.9 | 7.0 | .5 | 100.0 | 59.5 |
| GENITAL TRACT & EXTERNAL GENITALIA, | | | | | | | | | | | | |
| Corpus of Uterus | — | .2 | 2.1 | 4.8 | 18.1 | 32.1 | 28.7 | 11.4 | 1.9 | .7 | 100.0 | 57.3 |
| Cervix of Uterus | — | .1 | 2.3 | 14.1 | 29.7 | 29.1 | 17.0 | 6.2 | .7 | .8 | 100.0 | 51.5 |
| Ovaries | — | 1.6 | 4.8 | 10.3 | 24.3 | 30.5 | 20.5 | 6.3 | 1.1 | .6 | 100.0 | 52.1 |
| Fallopian Tubes | — | — | — | — | 13.3 | 66.7 | 13.3 | 6.7 | — | — | 100.0 | 56.3 |
| Vagina | — | 1.3 | 1.3 | 5.2 | 20.7 | 22.1 | 22.1 | 18.2 | 9.1 | — | 100.0 | 59.5 |
| Labia Minora and Clitoris | — | — | — | 3.1 | 6.3 | 12.5 | 40.6 | 31.2 | 6.3 | — | 100.0 | 65.9 |
| TOTAL | — | .5 | 2.7 | 10.3 | 24.7 | 30.2 | 21.5 | 8.1 | 1.3 | .7 | 100.0 | 53.6 |
| SYSTEMIC DISEASES | | | | | | | | | | | | |
| Acute Leukemia | 25.7 | 11.4 | 8.6 | 11.4 | 5.7 | 20.0 | 2.9 | 11.4 | — | 2.9 | 100.0 | 34.1 |
| Myelogenous Leukemia | 10.6 | 6.8 | 7.6 | 15.1 | 11.4 | 20.5 | 15.9 | 10.6 | 1.5 | — | 100.0 | 44.7 |
| Chronic Lymphatic Leukemia | 19.0 | 12.1 | 2.3 | 2.3 | 7.6 | 21.2 | 19.7 | 14.3 | — | 1.5 | 100.0 | 43.5 |
| Lymphosarcoma | 3.8 | 2.5 | 12.6 | 10.1 | 15.2 | 15.2 | 29.1 | 8.9 | 1.3 | 1.3 | 100.0 | 49.7 |
| Lymphoblastoma (not Hodgkin's) | 4.1 | 4.1 | 6.1 | 4.1 | 20.4 | 22.5 | 24.5 | 12.2 | 2.0 | — | 100.0 | 52.1 |
| Mycosis Fungoides | — | 25.0 | — | — | — | 50.0 | — | 25.0 | — | — | 100.0 | 50.0 |
| Reticulum Cell Sarcoma | — | — | — | 5.6 | 11.1 | 11.1 | 44.4 | 27.8 | — | — | 100.0 | 62.8 |
| Monocytic Leukemia | — | — | 14.3 | — | — | 57.1 | — | 28.6 | — | — | 100.0 | 56.4 |
| Hodgkin's Disease | — | 9.8 | 16.2 | 17.3 | 15.7 | 17.3 | 16.2 | 6.5 | .5 | .5 | 100.0 | 44.2 |
| Others | 10.5 | 15.8 | — | 10.5 | 5.3 | 15.8 | 15.8 | 26.3 | — | — | 100.0 | 47.6 |
| TOTAL | 8.3 | 8.3 | 9.1 | 10.9 | 12.3 | 19.4 | 18.8 | 11.3 | .8 | .8 | 100.0 | 45.7 |
| METASTATIC CANCER (GENERALIZED) NO PRIMARY DISCOVERED | | | | | | | | | | | | |
| TOTAL | .4 | 1.7 | 1.7 | 6.5 | 16.0 | 26.2 | 30.8 | 12.4 | 3.0 | 1.3 | 100.0 | 57.2 |
| GRAND TOTAL | .7 | 1.1 | 2.8 | 8.7 | 20.5 | 25.9 | 23.8 | 12.6 | 2.7 | 1.2 | 100.0 | 55.4 |

*The Nomenclature used is the Nomenclature of Diagnoses of the Memorial Hospital for the Treatment of Cancer and Allied Diseases, New York City.*

treatment. That age has a bearing on prognosis has long been established. The percentage distribution of age for each of the sites of cancer breaks down the total cases into small enough units so that the specific influence of age becomes relatively apparent.

The percentage of female cancer patients receiving treatment within one, four, or six months of first symptoms is shown in Table IV. About one-fifth of females over the entire period have been treated within one month of first symptom. About 40 per cent are treated within four months of first symptom and about half are treated within six months of first symptom.

The survival tables per 100,000 females in Connecticut shown in Table I are based on the status of the individuals as of April 1947. At that time, there were over 3000 individuals who had survived treatment for more than five years, of whom 1961 were females. For the encouragement inherent in improving results, the distribution of traced living individuals microscopically proved to have had cancer alive at yearly intervals following treatment together with the percentage survivals is shown in Table V. The untraced cases were not included because it was not known whether they were living or dead. There has been a steady improvement in survivals in Connecticut. By comparing the experience in each year with the relative experience in each subsequent year, a marked change upward in survival is noted. The percentage distribution of five-year survivals of certain selected sites is shown in Table VI. For the period from 1935 to 1941, 30.9 per cent of the microscopically proved traced cases among females survived five years. Of the total which survived five years, 35.5 per cent had had cancer of the breast, 15.5 per cent of the cervix uteri, 11.6 per cent of the corpus uteri, 11.3 per cent of the skin, 0.8 per cent of the stomach, 1.3 per cent of the urinary bladder, and 24.0 per cent of other sites.

The relative curability of selected sites of cancer is demonstrated in Table VII which gives the comparison between the distribution of total cancer among females and the distribution of five-year survivals. Although cancer of the breast accounts for only 25.3 per cent of total cancer among females, this is the site of 35.5 per cent of five-year survivals. Cancer of the cervix uteri accounts for 11.1 per cent of all cancer among females, and for 15.5 per cent of five-year survivals. Cancer of the corpus uteri accounts for 7.7 per cent of total cancer and 11.6 per cent of five-year survivals. The skin acounts for 7.3 per cent of total cancer among females and 11.3 per cent of five-year survivals. Cancer of the stomach accounts for 5.0 per cent of total cancer among females and 0.8 per cent survivals. Cancer of the urinary bladder accounts for 1.6 per cent of total cancer and 1.3 per cent of five-year survivals. Other sites which account for 42.0 per cent of all cancer net only 24.0 per cent of the five-year survivals.

**Cancer Record Registry**
**Division of Cancer and Other Chronic Diseases**
**Connecticut State Department of Health**

**TABLE IV**
***Percentage of Cancer Patients Receiving Treatment Within One, Four and Six Months of First Symptoms***
**FEMALES**

| Year | One Month | Four Months | Six Months |
|---|---|---|---|
| 1935 | 18.4 | 39.5 | 50.3 |
| 1936 | 20.3 | 37.0 | 49.7 |
| 1937 | 20.9 | 40.4 | 50.1 |
| 1938 | 22.4 | 40.0 | 49.6 |
| 1939 | 20.6 | 39.7 | 49.2 |
| 1940 | 20.4 | 40.2 | 51.4 |
| 1941 | 25.3 | 43.2 | 51.2 |
| 1942 | 23.3 | 44.3 | 54.2 |
| 1943 | 24.7 | 43.2 | 53.0 |
| 1944 | 22.4 | 43.5 | 52.0 |
| 1945 | 20.1 | 40.6 | 50.5 |
| 1946 | 20.6 | 40.2 | 48.8 |

Cancer among females is a disease which may occur at any age. It rarely strikes before 20, actually in less than 2.0 per cent of all cases. When it does occur among children it is usually in the skin, soft parts, bones, brain, eye, kidney, adrenal gland, or ovary or it is one of the lymphoma or leukemia group of diseases. The average age at time of treatment of all females with cancer is 55.4 years. For skin cancer, the average age at time of treatment is 60.7 years. For brain cancer it is 43.0 years. For cancer of the cervix uteri it is 51.5 years, for cancer of the breast, 55.8 years, and for cancer of the corpus uteri, 57.3 years. A total of 2467 individuals, or 15.3 per cent of all females with microscopically proved cancer reported to the registry, were over 70 years of age at time of treatment.

Cancer among females occurs with greatest frequency in the breast and then in descending order of broad sites in the female genital tract, the abdominal cavity viscera, the skin, the urinary tract, the chest cavity viscera, the miscellaneous structures of the head and neck, the upper respiratory and alimentary tracts, the central nervous system, the soft parts, and the bones. In 4.6 per cent of all reported cases, the disease was generalized at time of treatment and no primary focus was discovered. This group is becoming smaller each year.

In a report describing this registry[2] in 1943, it

**Connecticut State Department of Health**
**Cancer Record Registry**
***Distribution of Traced Living Individuals, Microscopically Proved to Have Had Cancer, Alive at Yearly Intervals Following Treatment***
**By Cases and Percentage—FEMALES**

**TABLE V**

| Year of Admission | Total Treated | Alive Year of Treatment | Alive 1 Yr. After | Alive 2 Yrs. After | Alive 3 Yrs. After | Alive 4 Yrs. After | Alive 5 Yrs. After | Alive 6 Yrs. After | Alive 7 Yrs. After | Alive 8 Yrs. After | Alive 9 Yrs. After | Alive 10 Yrs. After | Alive 11 Yrs. After |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1935 | 815 | 573 | 385 | 311 | 269 | 230 | 204 | 188 | 169 | 155 | 145 | 141 | 136 |
| | | 70.3 | 47.2 | 38.2 | 33.0 | 28.2 | 25.0 | 23.1 | 20.7 | 19.0 | 17.8 | 17.3 | 16.7 |
| 1936 | 839 | 608 | 420 | 336 | 295 | 261 | 227 | 209 | 197 | 183 | 171 | 164 | |
| | | 72.5 | 50.1 | 40.0 | 35.2 | 31.1 | 27.1 | 24.9 | 23.5 | 21.8 | 20.4 | 19.5 | |
| 1937 | 969 | 708 | 479 | 366 | 299 | 267 | 236 | 220 | 204 | 188 | 183 | | |
| | | 73.1 | 49.4 | 37.8 | 30.9 | 27.6 | 24.4 | 22.7 | 21.1 | 19.4 | 18.9 | | |
| 1938 | 1092 | 788 | 566 | 463 | 384 | 349 | 326 | 298 | 279 | 267 | | | |
| | | 72.2 | 51.8 | 42.4 | 35.2 | 32.0 | 29.9 | 27.3 | 25.5 | 24.5 | | | |
| 1939 | 1199 | 886 | 632 | 507 | 446 | 399 | 372 | 347 | 332 | | | | |
| | | 73.9 | 52.7 | 42.3 | 37.2 | 33.3 | 31.0 | 28.9 | 27.7 | | | | |
| 1940 | 1149 | 851 | 625 | 545 | 494 | 432 | 391 | 368 | | | | | |
| | | 74.1 | 54.4 | 47.4 | 43.0 | 37.6 | 34.0 | 32.0 | | | | | |
| 1941 | 1376 | 1077 | 836 | 718 | 643 | 579 | 545 | | | | | | |
| | | 78.3 | 60.8 | 52.2 | 46.7 | 42.1 | 39.6 | | | | | | |
| 1942 | 1487 | 1138 | 897 | 778 | 702 | 663 | | | | | | | |
| | | 76.5 | 60.3 | 52.3 | 47.2 | 44.6 | | | | | | | |
| 1943 | 1548 | 1182 | 920 | 790 | 725 | | | | | | | | |
| | | 76.4 | 59.4 | 51.0 | 46.8 | | | | | | | | |
| 1944 | 1659 | 1287 | 1008 | 888 | | | | | | | | | |
| | | 77.6 | 60.8 | 53.5 | | | | | | | | | |
| 1945 | 1655 | 1308 | 1113 | | | | | | | | | | |
| | | 79.0 | 66.9 | | | | | | | | | | |

was stated: "The groundwork of a state-wide functioning cancer record registry has been laid in Connecticut. That it could work effectively in a period beset by a shortage of physicians, a preoccupation of individuals, and a shifting population presages for the future a means of augmenting in the most direct way existing facilities by making available to all participants, individual physicians, hospitals, medical schools, and health departments, the facts upon which an ever-improving program may be built. Private physicians have found that the direct approach of the follow-up worker in advising the patient to report for a clinical check has resulted in smooth running continuity in the treatment of cases and has been sought for their private cases by many of them. A method of reporting has been evolved without recourse to regulation, with no personal inconvenience to physician or patient, and incidental to the establishment of this registry. As a direct result of this concerted effort, individuals with cancer are reporting regularly to their physician or hospital for verification of their state of health. This is stimulated by a consistent policy of reminding through the clerical staff of the hospital. By such a simple plan of coordinated effort of physician, hospital, health department, and layman, information contained in records lying in separate hospital files is now becoming available in the central file for massed statistical appraisal and in the local hospital files for statistical presentation of clinical data."

In April 1947, there were 11,900 living traced individuals, over 3000 of whom had survived over five years, known to the registry. Of the total survivals, 7,169 were females, and of the over five-year survivals 1961 were females. A Mutual Education Program begun in November 1946, among physicians, and financed by the United States Public Health Service through the Connecticut State Department of Health enables each hospital four times a year to send three members of the staff to visit the cancer clinic of another hospital in the State where either participation in or auditing of an active clinic is possible. Evaluation of end results in the registry demonstrated that the general average of services rendered in Connecticut hospitals was high and that it could be improved by sharing the knowledge. The increase in reported early cancer, and the greater ease in obtaining follow-up of private patients which has occurred since the Mutual Education Program began, testifies to its efficacy. The spontaneous letters of enthusiasm elicited from the physicians themselves is further evidence that it is meeting a need.

Cancer Record Registry
Division of Cancer and Other Chronic Diseases
Connecticut State Department of Health

**TABLE VI**

***Proportionate Distribution of Five-Year Survivals of Selected Sites***
**1935-1941**

| Site | Survivals | Percentage |
|---|---|---|
| Breast | 816 | 35.5 |
| Cervix Uteri | 357 | 15.5 |
| Corpus Uteri | 268 | 11.6 |
| Skin | 260 | 11.3 |
| Stomach | 18 | .8 |
| Bladder | 29 | 1.3 |
| All Others | 553 | 24.0 |
| TOTAL | 2301 | 100.0 |

Cancer Record Registry
Division of Cancer and Other Chronic Diseases
Connecticut State Department of Health

**TABLE VII**

***Comparison Between Distribution of Total Cancer Among Females and Distribution of Five-Year Survivals by Selected Sites***

| Site | Per Cent of Whole | Per Cent of Five-Year Survivals |
|---|---|---|
| Breast | 25.3 | 35.5 |
| Cervix Uteri | 11.1 | 15.5 |
| Corpus Uteri | 7.7 | 11.6 |
| Skin | 7.3 | 11.3 |
| Stomach | 5.0 | .8 |
| Urinary Bladder | 1.6 | 1.3 |
| Others | 42.0 | 24.0 |

The possibility of improved prognosis among females who have or may develop cancer lies in the persistent stimulation of conscious knowledge of the disease and its implications among the profession and the populace, the supplementation of existing diagnostic and therapeutic resources, and the application in the clinic of the results of laboratory research. Above are the facts of incidence and survivals. Each year reveals a larger proportion of survivals. More general adequate surgical intervention in cancer of the stomach, the intestines, the head and neck, and the urinary bladder will improve the chances of survival and cure of large numbers of patients. Reduction of delay would result in immediate improvement in cancer of the breast and genital tract, which together account for half of all cancer among women.

Finally, the location of every female with cancer should be known. Follow-up as long as she lives should be effected so that the newer findings of the laboratory for alleviation as well as cure could be applied universally without delay. The responsibility of the workers in the field is great. It includes education of the individual with the incipient cancer, detection of the beginning cancer, treatment of the existing cancer, follow-up of the treated cancer, rehabilitation of the cured and the treated but uncured patients, and the comfort of the terminal patient.

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## TECHNIQUE LIMITS CANCER AREA REMOVAL

A tandem operation, combining chemistry, surgery and the microscope, to eliminate some cancers without taking healthy tissue has been announced by Frederic E. Mohs, M.D., of the University of Wisconsin Medical School.

This method often avoids excessive defects after operations for cancer of the lips, nose, ears, or other readily accessible portions of the body, Dr. Mohs said. He exhibited the technique at the Cancer Congress held recently in St. Louis, Mo.

In one case, the eye was saved in a man whose cancer extended deep beside and around the eyeball, it was reported.

Chemistry is used first. A preparation containing zinc chloride is put over the tumor area. It penetrates into the tissue, hardening a thin layer of tissue. Twenty-four hours later this is cut out. Then under the microscope the exact areas affected by cancer can be located. The chemical kills cancer cells, but they still can be seen microscopically and a "map" of cancer shots can be drawn.

The cancer areas are treated again with the chemical and another layer removed.

Mortality in operations is virtually zero.

## X-RAY THERAPY OF LYMPHOID TUMORS

Prospects for cure of lymphoid tumors are better than generally believed, physicians Hugh F. Hare, William C. Mulray and C. Franklin Sornberger of the Lahey Clinic, Boston, declared at the Radiological Society held recently in St. Louis.

But they stressed that early diagnosis and treatment are essential for successful treatment.

Of 181 patients seen during the years 1934 to 1942 inclusive, 52, or 29%, were living and well at the end of five years and of 21 patients followed for a 10-year period, 17 remained alive and well.

No other tumor, the doctors said, responds as quickly as lymphoid tumor to x-ray treatment. X-ray treatment helps to shrink the tumor and relieve the pain.

# INTERNATIONAL SECTION

MEDICAL WOMEN'S INTERNATIONAL ASSOCIATION

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*Hanthorstratt 50, Amsterdam Z,*
*The Netherlands.*

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*75 rue de l' Assomption,*
*Paris, xviéme, France.*

## CANCER CONTROL IN FINLAND

### *Group Examination of Women*

AINO TEITTINEN, M.D.

IN NOVEMBER 1945, the medical women of Finland held their customary autumn meeting in Helsinki. This meeting had already become traditional and as usual there was a large attendance from all over the country. The most remarkable part of the program was the statement made by Dr. Helmi Jaakkimainen relating to group examinations for cancer control carried out in the United States by medical women. Dr. Jaakkimainen's appeal that something similar be done in Finland was left to germinate. A committee of four was appointed.

When Spring came this committee announced that it was ready to organize a clinic for group examination of women. The Finnish Cancer Association was interested in the project and promised economic and practical support. It was felt that the Clinic, first of its kind in Finland, should be established as an experiment in some rural parish in Finland, in a place where it was difficult, because of poor bus or train connections, for patients to get to a specialist for examination. The parish Lammi in Tavastland, at a distance of twenty-five miles from the nearest city and seventy-five miles from the capital, was the place finally selected.

Every woman past thirty in the parish was sent a letter as a personal invitation from the Finnish Cancer Association to come for a medical examination, without charge. The local physician and health nurse sent out the invitations and arranged the district division for the examinations. On June 2, 1946, a cancer team, composed of Dr. Saga Palmberg, two health nurses, and myself, assembled at the center of the parish Lammi, and the tour began from one elementary public school to another. Examinations were carried out in sixteen different places during one month.

The population of the parish at the time was 8,000, of whom 1966 were women past thirty; of these 1227 came for examination, 62 per cent of those invited. In addition, five men applied. A skin cancer was found in one man.

For every patient the procedure was as follows: (1) a case history was taken; (2) a general examination was made; (3) a bimanual and vaginal examination was carried out; and (4) naevi, hemangiomas, and fibromas were marked on a chart. In addition to possible cancers and gynecologic conditions, other diseases were looked for; and when necessary patients were referred to suitable places for treatment.

Patients with suspected cancer, even polypi, were sent to the Roentgen Therapy Institute of Helsinki; while those with myomas, ovarian tumors, sterility, or endometriosis were referred to the Gynecologic Clinic of Helsinki. A large number of patients with portio erosions or polypi, and sufferers from stomach pains were sent to the local physician for further examination.

Our discoveries of cancer were few. In the whole group there were only five cases which had not been found before and two which had been diagnosed earlier. The five new cases of cancer included one breast carcinoma, two skin carcinomas, one bladder carcinoma, and one gastric carcinoma.

A striking discovery was the abundance of erosions and polypi. We found 231 erosions—nearly 20 per cent—and 86 polypi—7 per cent. As yet none of these has been found to be cancerous.

Other pathological conditions found were: Profuse lacerations, 41 cases; ovula nabothi, 8 cases; metropathias, none malignant, 8 cases; myomas, 32 cases; ovarian tumors, 10; cases of sterility, 25; endometriosis, 6 cases; prolapses, at least 13 cases; salpingo-ovaritis, mild, 252 cases. Thirty-seven of the patients were pregnant. Eight breast tumors were found, one of them the so-called bleeding breast. Chronic mastopathia occurred 134 times, and 262 cases of struma were found. Pathological conditions in the mouth were found in 21 patients; e.g., palatum fissum, leukoplakia, epulis, tonsillitis, and chronic periodontitis.

Tabulation of the histories showed that 371 patients complained of indigestion; 418 of pelvic pains, 504 of back pains, and 523 of leukorrhea. There was a history of cancer in the family in 223 cases—18 per cent. Laparotomy had been previously done in 31 cases. Roentgen therapy for profuse bleeding had been given in 7 cases.

Of the 1227 patients 993 were married—80 per cent; and 77 were virgins. Altogether there were 3796 children to 981 mothers, or 3.87 children to a mother. Miscarriages had occurred in 230 cases.

Of the 1227 women, 467—40 per cent—were in the climacteric. As to age, the patients were chiefly between 30 and 60. There were 66 patients under 30, who had of course not been invited, and 213 over 60.

The patients showed great interest. In spite of the busy summer time, women came to the examination places in response to the personal letter of invitation; and in the neighboring parishes a similar measure was eagerly expected. Following this demonstration more patients came to the Roentgen Therapy Institute in Helsinki from every corner of the country, asking for examination.

A little over a year later, in September 1947, at the request of the Finnish Cancer Association, the study was continued. Patients with erosions, polypi, chronic mastitis, and other pathological conditions were invited to come for re-examination by Dr. Palmberg. Of the 454 persons invited, 49.4 per cent came. No new cases of cancer were found, but nine patients were sent to the Roentgen Therapy Institute for more thorough investigation. Seventeen extirpated polypi were found to be benign.

We intend to carry on these group examinations, but as our country is sparsely populated it is difficult to decide whether an ambulatory cancer team would not be more useful than a systematic survey of parishes in rural areas. As yet no group examinations of healthy people have been organized in Helsinki, but in the near future we shall be able to realize the idea inside the Roentgen Therapy Institute.

(EDITOR'S NOTE. *This interesting report on cancer clinics in Finland, prepared by Dr. Teittinen, was sent to us by Dr. Anni Seppanen,* JOURNAL *correspondent in Finland.*)

## THE DANISH ANTI-CANCER LEAGUE

### *Organization and Undertakings*

THE PURPOSES of the Danish Anti-Cancer League are: (1) to give financial support to radium clinics and to contribute to the purchase of the necessary therapeutic equipment, including radium; (2) to support experimental and clinical cancer research; (3) to spread knowledge as to the nature and treatment of cancer, to the extent deemed necessary and appropriate; and (4) to supplement public aid to distressed cancer patients. The management of the League is in the hands of the Danish Cancer Committee, of which Prof. Dr. Niels Bohr is president. A Board of Directors, consisting of thirty members, has the decision on all important matters, and a small committee of five members directs the activities.

The League has established three radium clinics in the cities of Copenhagen, Aarhus, and Odense, of 117, 104, and 50 beds respectively, and maintains mobile clinics and wards for roentgen therapy. Each of these clinics is managed independently by a Board of Directors consisting of representatives of the League, of the local cancer society, and of the hospital with which the clinic is connected—the Finsen Institute in Copenhagen, the Municipal Hospital of Aarhus, and the City and County Hospital of Odense. The deficit from the operation of these clinics is met by the League, which receives an annual grant from the Danish Government. The clinics, the x-ray equipment (including a million volt machine, recently built), and 6.036 grams of radium belonging to the League, represent an investment of approximately Kr. 5,000,000.

Research in cancer is supported by the League, which maintains research laboratories in connection with the clinics, at a cost of about Kr. 45,000 annually, and also makes grants to physicians, scientists, and others working on the problems of cancer. This support of research costs the League approximately Kr. 176,000 a year. In 1942, the League in co-operation with the Danish Medical Officers' Association founded a Cancer Register, a card index of all the hospitalized cancer patients in Denmark, which it supports at a cost of about Kr. 54,000 annually.

To carry out its third purpose, lectures on cancer are given for the public throughout the country, usually arranged by the local cancer society under the league, which supplies lantern slides, films, and scripts for the use of the lecturers. Admission to these is always free. Through the co-operation of the Danish Broadcasting Service, talks prepared by the League are sent over the air. The League also publishes pamphlets giving the facts about cancer, the early symptoms, the conditions which must be guarded against, etc.

Aid to cancer patients in need takes the form of grants of money or of treatment and care in one of the clinics, free or at reduced costs. Some Kr. 28,500 was spent in this way in 1946-47.

For its financial support the League depends chiefly on membership dues, together with contributions, legacies, and subsidies from municipalities. "Cancer Day" is observed annually, when paper badges are sold all over Denmark. The League also shares in the profits from the sale of the special "congratulation-forms" of the Danish Government Telegraph.

The League consists of 190 local societies, scattered all over the country, with the main office in Copenhagen. These local societies have charge of propaganda work in their own localities, giving the public the facts about cancer, its early diagnosis, the signs and symptoms of incipient cancer, proper treatment, and so forth, and interesting them so that they will become members of the League and support its activities. Membership dues are collected by the local society, which keeps a certain amount for its own local expenses and transmits the balance to the League headquarters.

(EDITOR'S NOTE: *This report on the Danish Anti-Cancer League was sent to the* JOURNAL *by its correspondent in Denmark, Dr. Agnete Heise.*)

## CANCER CONTROL IN TURKEY

THE CORRESPONDENT in Turkey of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION reports from Ankara (JAMA, 136: 488, Feb. 14, 1948) regarding the present situation in Turkey. He points out that since about three quarters of the population of Turkey lives in 40,000 villages it is difficult to obtain accurate statistics, but says that "there is ample evidence through the steadily increasing admissions of cancer patients to town and city hospitals that cancer in Turkey is on the increase, especially cancer of the lung and prostate." The number of cancer patients admitted to hospitals in Turkey from 1935 to 1944 is given as 18,968 men and 21,061 women, a total of 40,029. These are divided into age groups as follows: 10 to 34 years, 3,119; 35 to 44 years, 6,199; 45 to 54 years, 13,012; 55 to 64 years, 11,420; 65 and over, 6,279. Of these, 35,108 were Mohammedans; 3,720 were Christians; and 1,201 were Jews. The whites numbered 39,982 and the colored 47.

It is expected that more information on the cancer problem in the country will be obtained through the establishment last year of a Cancer Institute in Ankara and a Benevolent Society for the investigation and control of cancer. Branches of the Society will be established in other cities and towns.

The Institute has fifty-seven members, professsors, doctors, and other scientists, with an administrative committee, of which Professor Irfan Titiz is president, and Dr. Perihan Cambel, general secretary. The program is an elaborate one. It is "to open laboratories and control centers, engage in research work and further the prevention and early diagnosis of cancer, enlighten the public on the subject, remove the fear and anxiety and aid those afflicted, follow up cancer patients, publish pamphlets, posters, books and reports, give radio talks concerning cancer, take steps to inform the medical and allied professions of the progress in cancer research and other matters pertaining to cancerology, get in touch with foreign cancer institutes and cancer control societies. On payment of a yearly contribution of at least ten Turkish pounds friends of the Society are accepted as members. These contributions are to go toward a fund from which cancer-afflicted

persons will receive aid, the number of hospital beds will be augmented, and ultimately a cancer hospital will be established."

The first Cancer Institute in Turkey was established at Istanbul University in 1927, by Dr. Hamdi Suad, well known pathologist, who was also able to add a cancer department to the University's medical school museum. With the reorganization of the University in 1933, Dr. Suad was retired and Professor Oberndorfer of Germany was appointed in his place, and continued the work of the Cancer Institute until his death in 1942. Dr. Hamdi Suad carried on his work at the Istanbul Charity Hospital until his death, four years after his retirement.

(EDITOR'S NOTE. *Dr. Perihan Cambel, general secretary of the Cancer Institute in Ankara, is the correspondent for the* JOURNAL OF THE AMERICAN MEDICAL WOMEN'S ASSOCIATION *in Turkey. Dr. Cambel is expected to return to the United States soon to engage in cancer research with Dr. Cowdry in St. Louis.*)

## CANCER CONTROL IN THE UNITED STATES

**Charles S. Cameron, M.D.**

*Medical and Scientific Director, American Cancer Society*

CANCER IS BEING attacked with energy, variety, and plan. Recent years have shown great changes and much progress. This month the American Cancer Society through its million Field Army volunteers is again soliciting funds for the program of research, education, and service. The goal for 1948 is $16,042,000. Volunteers organize meetings, distribute educational pamphlets, man the 324 information bureaus on cancer control. Under medical direction they assist indigent patients by preparing bandages—3,500,000 last year—act as chauffeurs in transportation corps in 33 state divisions, give stenographic and other service in clinics, do many chores to improve the lot of the terminal case.

In research there is a healthy move towards integration that began in 1945 when the National Research Council, at the request of the American Cancer Society, formed the Committee on Growth. Nineteen of the country's ablest scientists came together to survey cancer research. In the past, work was brilliant but disorganized; strong individuals drove hard at their specialties with too little exchange of information and almost no common planning.

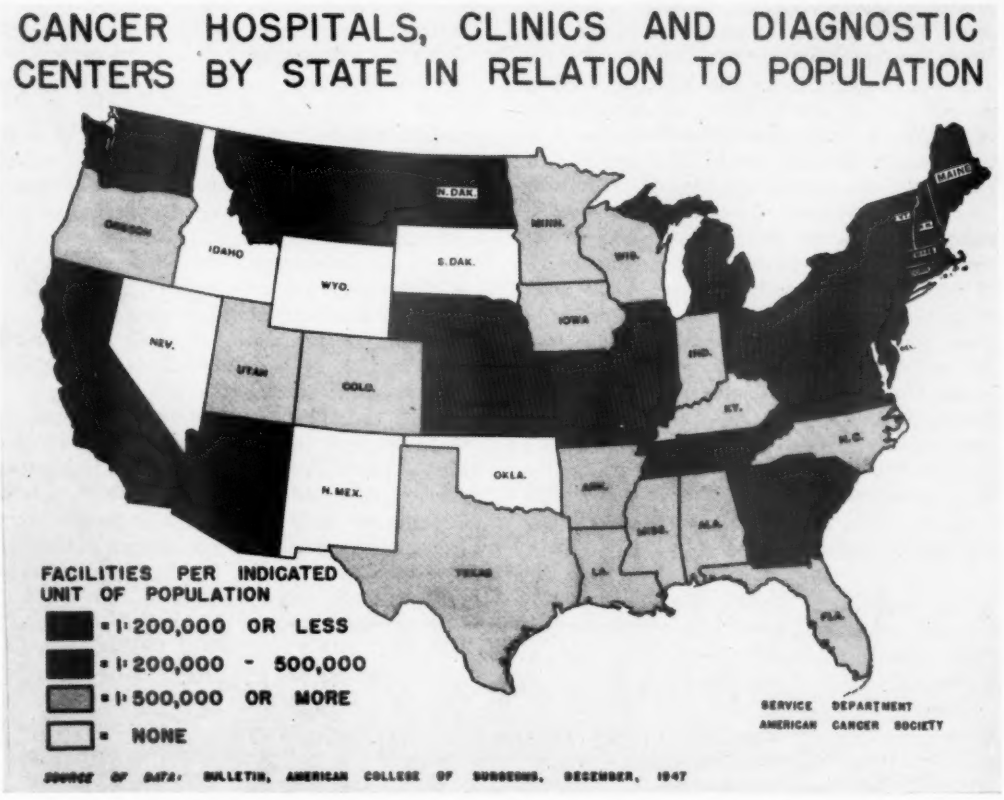
Now the Committee on Growth brings together regularly in its sections and panels 140 research leaders in biology, chemistry, chemotherapy, physics, and clinical investigation, to review work done and to recommend allocations for new and old projects. Grants provide fellowships to train young investigators, support studies on all aspects of normal and malignant cell growth, encourage clinical research, and aid investigation in a dozen institutions where research and treatment are linked.

The American Cancer Society has appropriated $2,895,288 for research during 1948 in twenty-six States and the District of Columbia. Already at hand are applications for grants totalling two million dollars, for which no money is available.

In 1947, the Congress appropriated $14,000,000 for the National Cancer Institute. Of this $8,500,000 is earmarked for research and for training fellows, $1,500,000 for teaching grants and for medical traineeships, and $4,000,000 for broad cancer control including grants to State departments of health.

It has been said that the solution of the cancer problem waits on discovery and discovery cannot be ordered nor purchased. But there is no question that present fundamental research will bring important scientific developments. A significant bit of progress, growing out of war experience, has been the application of the nitrogen mustards to patients with advanced lymphosarcoma or Hodgkin's disease. Another development is the use of the female sex hormone, stilbestrol, in metastatic cancer of the prostate in men. Less spectacular is the treatment of women with advanced cancer of the breast by the male hormone. One-third of the women who before the menopause have disseminated cancer of the breast experience improvement from testosterone. Women over sixty respond favorably to stilbestrol and other female hormones.

Drastic surgery is now possible in many patients who were formerly considered inoperable. Chemo-




*The above map indicates facilities approved by the American College of Surgeons.*

therapy and antibiotics, preservation of normal fluid and salt balance, maintenance of adequate nutritional reserves, prevention of anemia, better anesthesia, these improved techniques have made death exceptional from shock, dehydration, or infection. Resection of the tumor-bearing organ and excision of the efferent lymphatic pathways and the adjacent nodes have brought improved results in selected cases of cancer of the stomach, uterus, and rectosigmoid, and in melanoma.

There is a clearer understanding of the virtues and limitations of radiotherapy. More reliance is being placed on the high voltages, the super hard x-rays of the 800 to 1,000 KV machines. Radioactive and stable isotopes are invaluable as tracers in the study of cell metabolism. Two types of thyroid cancer, constituting 15 per cent of such tumors, have been immobilized by radioactive iodine. Radioactive sodium, of limited value against lymphosarcoma and Hodgkin's disease, is very useful against polycythemia vera. Radioactive phosphorus is effective in treating certain leukemias but not much more so than external roentgen therapy.

There has been progress; but today it is true as it was 1900 years ago when Celsus said, "only the beginnings of cancer permit a cure." A heavy burden rests on the first physician who sees the patient. A survey of responsibility in delays of proper treatment in 1938 indicated that the culpability was the patient's alone in 44.3 per cent of the cases, the patient's and physician's in 18 per cent, and the physician's alone in 17 per cent. There was no delay in 20.7 per cent. A follow-up study in the same area made in 1947 showed that the patient's responsibility had been reduced to 32 per cent, the patient's and physician's to 10.8 per cent, but the physician's had risen to 27.8 per cent. There was no delay in 29.4.

Interesting has been the development of special centers for the examination of well persons for lesions that might be or become malignant. There

are some 185 of these Cancer Detection Centers in thirty States and the District of Columbia, two thirds of them supported by Divisions of the American Cancer Society. Statistics vary widely, according to the amount of preliminary screening of patients, but cancers are found in from 0.5 to 2 per cent of those examined. To determine their proper place in cancer control the Society is now surveying the centers. One difficulty is that in many cities lists are so long that patients must sometimes wait six months for an examination. Certain centers will accept no new applications. A problem is suggested by the experience of a New Orleans center where 36 patients, 60 per cent of those reporting back to their own physicians with a clinic recommendation, received no further diagnostic procedure. The value of the comprehensive physical examination is beyond doubt but it is not clear to what extent it can become a practical means of broad-scale cancer control.

Cancer clinics approved by the American College of Surgeons are developing slowly. There are now 407 treatment and 43 diagnostic clinics in the United States. Six States have no such clinics and only one, New Hampshire, has a clinic for each 50,000 of its citizens. If a conservative figure of one clinic for each 100,000 in the population is accepted, there should be 893 more cancer clinics. There are only ten approved cancer hospitals, two in Massachusetts, two in Missouri, four in New York, two in Pennsylvania.

Statistics will be slow to reflect progress, but there are encouraging signs. Connecticut, for instance, reports that from 1935 to 1941 there was a gain of one third in the percentage of five year survivals among all those with cancer. In 1935, 22.1 per cent and in 1941, 33.5 per cent lived five years after treatment.

While much is being accomplished, more is needed in every field; more money, more lay education, more clinics, more hospitals, more research workers, more and better trained physicians and surgeons, and more concentration on the possibility of cancer by every doctor examining a patient.

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## THE FOURTH INTERNATIONAL CONGRESSES ON TROPICAL MEDICINE AND MALARIA

### Washington, May 10 to 18, 1948

An international congress on tropical medicine and malaria is now long overdue and more needed than ever before. The new knowledge and improved methods which have been developed since 1938, when the last such meeting was held in Amsterdam, have not yet been adequately discussed and evaluated by physicians, public health workers, scientists, and other professional persons interested in tropical medicine.

To correct this situation as promptly as possible the Fourth International Congresses on Tropical Medicine and Malaria will be held in Washington from May 10 to 18, 1948. The Congresses will be a joint meeting of two long-established organizations, the International Congress of Tropical Medicine and the International Malaria Congress. This will be the first meeting of either organization in the Western Hemisphere and the second in which the two have combined. The International Congress of Tropical Medicine is the older of the two. It held its first meeting in London in August, 1913, and its second in Cairo in December, 1928. The International Malaria Congress met first in Rome in October 1925, and again in Algiers in May 1930. Both Congresses met jointly in Amsterdam in September 1938, as the Third International Congress of Tropical Medicine and Malaria. A decade later, after a delay because of the war, their fourth meetings will likewise be combined in the Congresses now being organized in Washington.

The Congresses will be sponsored by the Government of the United States through its Department of State, which has invited over 60 governments to send official delegates. Similar invitations have gone to intergovernmental organizations with broad interests in health, such as the Interim Commission of the World Health Organization and the Pan-American Sanitary Bureau.

In addition to the official invitations of the Government of the United States to Governments and Inter-governmental Organizations to send official delegates, the Organizing Committee has invited over 150 societies and organizations interested in tropical medicine to send Institutional Delegates.

It is expected that between 1,000 and 1,500 persons will attend the Congresses.

Two special evening sessions will be held in the Departmental Auditorium. The first, on Wednesday, May 12, will commemorate the demonstration by Walter Reed of the mosquito transmission of yellow fever and will celebrate his admission to the Hall of Fame. The second, on Friday, May 14, will commemorate the fiftieth anniversary of the discovery by Ronald Ross of the method of malaria transmission. Unusual interest surrounds these two epoch-making events in tropical medicine.

Anyone desiring further information should write to the Executive Secretary, Fourth International Congresses on Tropical Medicine and Malaria, Department of State, Washington 25, D. C., asking for the Preliminary Announcement and the Advance Registration and Reservation Form.

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## THE CONQUEST OF CANCER

ONE HUNDRED YEARS AGO when the average expectation of human life was only thirty-four years, cancer was a remote possibility and could be disregarded. Today, when the average expectation of human life is sixty-four years, cancer is an ever present menace.

In the effort to conquer cancer, resources of all kinds are being mobilized. Vast sums of money from private and public funds are expended annually in research to discover what causes the cells of the human body to take on this lawless type of growth. Many of the world's greatest scientists are engaged in cancer research. With the enthusiasm and optimism of "The Admiral of the Ocean Sea," they pursue one line of experiment after another, confident that the goal is just around the corner. The whole civilized world follows their efforts with interest, admiration, and hope. Until these efforts are crowned with success, the control of cancer will continue to be a problem for the clinician.

In spite of the hopes aroused by the discovery of atomic energy, only three methods of treating cancer are recognized today, radical surgery, high voltage x-ray, and massive doses of radium. If discovered early, many cases of cancer can be permanently cured by these means. The early detection of cancer thus becomes one of the most important medical problems confronting the world today.

In the absence of serologic or other diagnostic tests, two methods of early detection are available. The first is education with reference to the early symptoms of cancer. The second is the periodic physical examination of presumably well persons.

The method of education was inaugurated in the late eighteen-nineties by Georg Winter, Professor of Gynecology at the University of Koenigsberg. It was introduced into this country by the American Cancer Society, which was organized in New York City in 1913. The importance of the campaign of education cannot be over estimated. Many lives have been saved and are being saved today by a knowledge of the "Seven Danger Signals" listed in the simple leaflets distributed by the Cancer Society.

The next step was taken by women physicians. In 1937, Dr. Elise L'Esperance opened a "Cancer Prevention Clinic" in the New York Infirmary for Women and Children. In 1938, a "Cancer Prevention Research Clinic" was established in the Hospital of the Woman's Medical College in Philadelphia. In 1943, Dr. Augusta Webster opened a "Cancer Prevention Clinic" in the Women and Children's Hospital in Chicago. To the public and to the medical profession, familiar with the menace of cancer and eager to do something about it, these clinics came as an answer to a long felt need. Cancer Prevention Clinics, Cancer Detection Clinics, Cancer Diagnostic Clinics multiplied throughout the length and breadth of our land. The number of cancers discovered in the clinics devoted exclusively to presumably well individuals averages less than one per cent. Lesions commonly believed to predispose to cancer are found in about twenty-five per cent of the examinees. The relief afforded the examinee when told that no sign of cancer has been detected cannot be measured.

The medical profession, trained by education and years of practice to care for individuals who are sick, is now confronted with a perfectly legitimate demand for diagnostic service on the part of individuals who are presumably well. Instead of contenting ourselves with deploring the fact of diagnostic delay, we are now obligated to perfect ourselves in diagnostic procedures whereby cancer can be detected in an early stage.

From the standpoint of early detection, cancers are divided into two groups: accessible cancers and inaccessible cancers. Fortunately most cancers are accessible, for the early detection of inaccessible cancers baffles the most expert. Presymptomatic cancers of the skin, oral cavity, breast, uterus, and rectum can be detected by a careful physical examination such as every practitioner of medicine has been trained to make.

Inspection of the stripped patient in a good light, palpation of the breasts, bimanual pelvic examination with careful inspection of the cervix through a speculum, digital examination of the rectum after an enema will suffice to detect the majority of accessible cancers in the presymptomatic stage. These simple procedures will also reveal lesions or conditions predisposing to cancer or may point to the need for more elaborate diagnostic procedures—biopsy, cystoscopy, or x-ray.

The office of the general practitioner is at present and for a long time will continue to be the first line of defense in the conquest of cancer.

CATHARINE MACFARLANE, M.D., F.A.C.S.

# ORGANIZATION

**Official Reports and Announcements of the Association**

## PRESIDENT'S MESSAGE

Plans for the Annual Meeting are in the making.

Dues are due. For 1948 they are five dollars. Please send to the treasurer, Mary R. Noble. (Winter address, 2615 North Second Street, Harrisburg, Pennsylvania).

Only members whose dues are paid by May 1 will receive ballots for the annual election, which will be conducted by mail. In this connection it is noted that the constitution provides that only ballots postmarked not later than May 15 will be recognized.

* * *

Only members of the American Medical Women's Association are eligible to hold offices in the local organizations which are affiliated as Branches. It costs but five dollars to become a member and thus make the organization an accredited one.

* * *

Any changes in the Branch officers should be reported.

* * *

The booklet of the Los Angeles society, Branch 23, is striking for its appearance. The cover is impressive in gilt paper. A full panel of officers and members with addresses makes it complete. Programs are omitted. We hope to hear of them later. Such reports are welcome.

* * *

At the Mid-Year Board Meeting it was voted that the Board recommend to the members, for action at the Annual Meeting, that:

The Committee on Elections be made a Standing Committee.

The Committee on Emergency Aid for Women Physicians be discontinued. The service to be continued as a part of the aid rendered under the American Women's Hospitals Committee.

To establish these changes it is required that the articles in the Constitution relative to these Committees shall be amended at the Annual Meeting.

* * *

It is proposed that Junior Branches of the AMWA be encouraged in medical schools with women medical students as members. To establish such a movement requires constitutional provision.

These are some of the agenda now appearing for presentation.

* * *

The subjects chosen for discussion at the International Meeting which is being planned for 1950 to be held in Philadelphia are thought provoking: "Anemia in Women" and "Pathology and Hygiene of House-work." Rapporteurs are being appointed and the material planned for.

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IT SCARCELY SEEMS possible that the Association year is well on its way out. Judging from the rapidity with which it has passed we must bestir ourselves to get all the accomplishment we can into its records.

TO THE MEMBERS OF THE BOARD OF DIRECTORS:

Attention is called that your reports should all be in the hands of the Recording Secretary in triplicate copy by June 1st. The idea is that any recommendations you may have may be studied by the Reference Committee, which now acts in place of the former Resolutions Committee. They will then be presented for action at the period given to new business. In this way your suggestions will receive proper consideration and attention.

TO REGIONAL DIRECTORS:

Regrets are offered that only one of these directors was present at the Mid-year meeting. We appreciate the reports you sent and hope to see you personally at the Annual Meeting.

TO COMMITTEE CHAIRMEN:

The matters that you wish to present that will need especial action should be reported to the Recording Secretary, of the American Medical Women's Association. This places them on the list of specific subjects upon which delegates may be instructed by their local Branches.

TO BRANCHES:

We know you are doing interesting things. We would like to know about them. We are interested in your social meetings, but especially are we interested in what you are doing to promote the progress of women's achievements. Have you a

woman you are supporting in school? Do you take part in the County Medical activities? Do you have a member who has received honors for her attainments, or who is engaged in unusual committee work?

I hope you read Dr. Maffett's three front plan for Medical Education for women.

As you know from my Mid-year report, I am most interested in the life of the medical student.

Please read the recommendation of the Membership Committee and have your delegate come instructed to vote concerning your decision regarding the effort to interest medical women students in the activities of the American Medical Women's Association and thus favor her early application for membership in our Organization.

Chicago is accessible and delightful in June, We hope your vacation plans will center about the Annual meeting as a focal point, and we shall have a lively, constructive, annual meeting.

From former experiences we know annual meetings are times of pleasant association with our former friends and of stimulating contacts with new members.

*Come, come.*
*Plan to come.*

MABEL E. GARDNER, M.D.,
*President.*

## BRANCH REPORTS

Branch Six, Omaha, Nebraska, held a tea at the home of Dr. Nancy Catania, Omaha, on January 11, 1948. The attendance was gratifying, doctors from both Nebraska and Iowa, and medical students from the University of Nebraska and Creighton University, as well as pre-medical students from Creighton and Nebraska, Duchesne College, and the University of Omaha, being present.

Dr. Aileen Mathiasen, Branch president, has been elected president of the staff of Mercy Hospital, Council Bluffs, Iowa.

## ANNUAL MEETING OF WOMEN'S MEDICAL SOCIETY OF NEW YORK STATE

**Hotel Pennsylvania, New York City, May 16-17**

The forty-first Annual Meeting of the Women's Medical Society of New York State will be held in New York City, May 16 and 17.

The President's Tea will be given on Sunday, May 16, from 4 to 6 p.m. The meeting will be held on Monday, May 17, at the Hotel Pennsylvania.

The program is as follows: 9:00 a.m.—Registration; 10:00 a.m.—Business Meeting; 1:00 p.m.—Luncheon; 2:00 p.m.—Scientific Sessions—Symposium on Vascular Diseases, by Dr. Teresa McGovern, Dr. Audrie L. Bobb and Dr. Margaret Stanley-Brown.

**Helen G. Walker, M.D.,** President
**Jennie D. Klein, M.D.,** Secretary

## IMPORTANT ANNOUNCEMENT

**regarding**

**Reservations for A.M.W.A.**

**Hotel Blackstone, Chicago, Illinois—June 19-20**

**Reservations at Hotel Blackstone, headquarters for the annual meeting, must be sent to the Hotel before May first. Members wishing to remain at the Blackstone during the A.M.A. meeting are urged to state this fact clearly in making reservations.**

## SUGGESTED AMENDMENT TO THE CONSTITUTION TO BE VOTED UPON AT THE JUNE MEETING

**Article II, Section 2(c)**

"Junior Branches may be organized in the Medical Schools admitting women students. Such Branches shall be initiated and supervised by the Organization and Membership Committee. The Associate Members shall constitute a nucleus for promoting such activities."

**Article V, Section 1, 3 (f)**

(And the rest of the numbers to shift accordingly):
(f) Committee on the Woman's Medical College of Pennsylvania.

**Article V, Section 13**

(And the rest of the section numbers to shift accordingly.)

(13) The Committee on the Woman's Medical College. The duties of this committee shall be to serve as liaison between the American Medical Women's Association and the Woman's Medical College of Pennsylvania. It shall keep the Association informed of the activities, plan and projects of the Woman's Medical College. It shall likewise keep the Woman's Medical College informed of the activities, plans and projects of the Association.

## REPORT OF NOMINATING COMMITTEE

The Nominating Committee has the privilege of presenting the following names as candidates for offices in the American Medical Women's Association for the year 1948-49.

**President-Elect:**
Dorothy W. Atkinson, M.D., San Francisco, California

**First Vice-President:**
Carroll L. Birch, M.D., Chicago, Illinois
M. Virginia Beyer, M.D., Sykesville, Maryland

**Second Vice-President:**
Viola J. Erlanger, M.D., San Diego, California
Elizabeth S. Waugh, M.D., Philadelphia, Pennsylvania

**Recording Secretary:**
Augusta Webster, M.D., Chicago, Illinois

**Corresponding Secretary:**
Isabel M. Scharnagel, M.D., New York, N. Y.

**Regional Directors:**

**Middle Atlantic Region:**
H. Gladys Kain, M.D., Washington, D.C.
Carolyn S. Pincock, M.D., Washington, D. C.

**South Atlantic Region:**
Amey Chappell, M.D., Atlanta, Georgia
Erma A. Smith, M.D., Durham, North Carolina

**Southeast Central Region:**
Helen M. Deane, M.D., Nashville, Tennessee
Estelle A. Magiera, M.D., Jackson, Mississippi

Respectfully submitted,

Antoinette LeMarquis, M.D., Frieda Bauman, M.D., Ruth Hartgraves, M.D., Ruth Blount Bennett, M.D., Dora F. Sonnenday, M.D., Chairman.

# Opportunities for Medical Women

IN THE UNIVERSAL EFFORT put forth in the battle against cancer, women physicians have a unique responsibility and opportunity. In many instances the delay in diagnosis of uterine cancer can be attributed to woman's reluctance to submit to a medical examination. Part of this reluctance is overcome if well trained and well recognized women specialists serve in clinics as well as in private practice where women patients may make appointments freely with them. It should, therefore, be the aim of all such centers to have a woman physician in attendance.

Much of the education in regard to symptoms, early examination, and treatment can be done by women physicians. This is a field in which women physicians engaged in raising a family can give some time as it can be done on an hourly basis and usually at the doctor's convenience. Talks to women's clubs or other women's groups would eliminate much of the fear and place the subject on a more realistic basis.

Finally, there are available to men and women a large number of research grants and fellowships, such as are made by the American Cancer Society, the Donner Foundation, the National Institute of Health, the Childs Foundation, the Finney Fellowship for Cancer Research, and the John and Mary Markle Fellowship. In order to obtain such a fellowship the physician should first find the place or the associates with whom she desires to work and then with their approval apply for a grant or fellowship. The New York City Cancer Committee of the American Cancer Society also supports fellowships in the Strang Cancer Prevention Clinic, Memorial Hospital, New York.

—H. E. THELANDER, M.D.

### CANCER CONTROL GRANTS

The National Cancer Institute made grants of one and one-half million dollars to 64 colleges, laboratories, and public health institutions as a result of the recommendations made at the two day meeting of the National Advisory Cancer Council in December. Half a million dollars was made available for research in 32 institutions, more than half a million for the improvement of teaching in medical schools, more than $100,000 for other projects largely in State health departments, and a quarter of a million for the reconstruction of the Roscoe B. Jackson Memorial Laboratory in Bar Harbor, Maine, destroyed in the November forest fires. This represents the first substantial construction grants ever made by the Council.

These December grants included other notable firsts. Grants of $13,000 and $10,000 respectively to scientists in the Pasteur Institute in Paris and the Hebrew University represent the first grants to scientists working outside the country. "They constitute," said Leonard Scheele, M.D., Director of the National Cancer Institute, "a move to assist in the mobilization of an international attack on cancer." This same meeting produced also the largest grant made to a single institution, $112,500 to Memorial Hospital in New York for five research projects and $30,000 for cancer pathology and medical training.

### VAN METER PRIZE AWARD

The American Association for the Study of Goiter again offers the Van Meter Prize Award of $300 for the best essays submitted concerning original work on problems related to the thyroid gland. Essays may cover either clinical or research investigations, should not exceed 3,000 words, and must be in English, typewritten in double spaced copy. The award will be made at the annual meeting of the Association in Toronto, May 6-8. Address Dr. Thomas C. Davison, Corresponding Secretary, 207 Doctors Building, Atlanta 3, Georgia.

### OPPORTUNITY WANTED

A residency in obstetrics and gynecology in order to meet Specialty Board Requirements is wanted by Dr. Edith Millican, now in China under the Presbyterian Board of Foreign Missions. Please reply to Dr. Evangeline Stenhouse, 55 East Washington Street, Chicago 2, Illinois, who has provided the following data: Edith Millican was graduated from the Shanghai American School. After pre-medical work in Wooster College, Ohio, she was graduated from the Woman's Medical College of Philadelphia, in 1938. She had one year of internship in the hospital of that college and then one year as a resident at the North Hudson Hospital, Weehawken, New Jersey. She passed her National Board examinations in 1939 and was licensed in the State of New Mexico when she was acting superintendent of the Presbyterian Hospital at Embuda, New Mexico. In 1943 she went to China to take charge of the obstetrical department of the Presbyterian Hospital in Hengyang, Hunan. When the city was about to fall, she moved the hospital to Tuhshan. From then on she was the superintendent of the refugee hospital as it moved from place to place before the Japanese. After V-J day she took her hospital and the staff she had held together back to the ruins of their old hospital, which she has rebuilt. She is now superintendent of the hospital at Chenhsien, one of the chain hospitals at the Hunan Mission.

# Public Relations Department

## CANCER CAN BE PREVENTED*

Madge C. L. McGuinness, M.D.

CANCER CAN BE PREVENTED. Cancer is curable when recognized early. Cancer is *not* contagious and it is *not* hereditary as we understand the term. Cancer is *not* a single disease. There are many kinds of cancer and some are more malignant than others. They are not all fatal in the early stage and most can be controlled at this time if treated properly.

Cancer, today, causes more fear than any other disease. Some people will not even listen when the word is mentioned, so great is their dread. They refuse to contribute even a few cents during a campaign for collection of funds or to accept a leaflet for fear they may have to think of this terror-inspiring subject. They imagine they can keep the disease away by ignoring it. This same attitude was taken by unthinking people toward insanity, tuberculosis, the great plagues and epidemics, and in fact most of the infectious diseases. Thus the control or wiping out of these scourges of mankind was delayed for years. For it is only by the facing of a fear and the facts concerning it that progress is made.

Cancer is with us. It kills throughout the country some 400 daily. It will continue to kill until our people as a whole face the fact that in many cases it is preventable and in the early stages it can be arrested and even cured.

We all know people who fancy they have cancer. They make their families unhappy and themselves miserable with fear. But do they do anything about it? Not at all. They just like to talk about it. So year after year they continue to talk until one fine day someone brings a physician upon the scene who, try as he may, cannot find a single symptom. Are they happy? Not at all. They keep right on nursing a secret sorrow, whilst burying relatives and friends by the score.

On the other hand, we all know people who fear to go to a physician lest they be told they have cancer, so they fret and worry themselves ill, while the hidden lesion which may amount to little in the beginning, grows and grows, and what might have been of slight consequence and easily removed becomes a sizeable tumor that may mean a major operation or call for the use of x-ray or radium, thus adding great expense to existent worries.

Fear of the knife is another cause keeping some people from admitting they have trouble. They do not yet know that there is an increasing number of lesions that can be treated by x-ray and radium, that the greatest number of growths are easily gotten at and quickly removed, if seen early and, that an ounce of prevention is still worth a pound of cure.

This is the age of prevention—we prevent accidents, we prevent epidemics, we prevent fires. Then why not prevent ill health? For if we prevent ill health we *must* prevent cancer. If we take stock of our health on our birthday—if we *still* count birthdays—have a complete physical examination by a competent physician, and find ourselves in excellent or even good condition, how much happier everybody is. But, if there be any thing out of the ordinary, we can remedy the fault as soon as discovered, let us take that "stitch in time" and then forget it. A lump in the breast, a growth of any kind on skin or mucous membrane, a discharge from any part of the body is usually innocent, *but* let's be sure about it, "better be safe than sorry."

Neglected, the lump gets larger and spreads, so does the sore; the discharge or bleeding becomes continuous. Now is the dangerous time, but prevention is still possible and help can still be given. Act quickly, consult your physician at once. Do not wait. Putting off from day to day is what makes the tragedy. Telling yourself, "Not now, but next week I will see about it," is what causes eventually a long and difficult operation, hospital expenses, x-ray or radium in large doses.

The longer the delay in treating cancer the greater the danger and the more costly the disease in time and money to the patient, to the physician, to the hospital, and to the community, for the man-hours lost to labor, the long hours in the operating room, the cost of nursing and the upkeep of cancer beds, add up to more and higher taxation for all of us.

Now, how can we prevent cancer? In 1775, when this country was fighting the Stamp Act and

*Radio presentation as part of the campaign of the American Cancer Society and its local chapters.

building up to its battle for "the right to life, liberty, and the pursuit of happiness," a physician made the equally important statement that "irritation can cause cancer," and this is as true in 1948 as it was in 1775.

Irritation can play a large part in new growths —a jagged tooth, an improperly fitting bridge or plate, too hot food quickly bolted, may cause in susceptible people, irritations that can later lead to cancer. So, let us make the dentist also responsible; let us visit him several times a year. A clean mouth usually means a healthy one.

Scars from old burns that are irritated may develop cancer. If there be any sign of activity in an old ulcer of this kind, let a competent physician judge of the condition and the treatment required. Do not attempt to treat it yourself. Too great exposure to sunlight without protection, as in workers outdoors—farmers or policemen, for instance—will frequently cause skin cancer. This is the most readily cured of all cancers and yields usually to x-ray or radium if treated early. Too long sun bathing on beach or hillside is dangerous, especially to sensitive skins. Delicate skins are more susceptible than tough ones and must be watched for the first signs of any abnormality. Workers in certain oils and dyes may be susceptible to cancer, so it is necessary to have them under supervision to prevent carelessness.

A routine examination after childbirth is necessary so that steps may be taken to repair any damage. In 6,000 cases of cervical tears after childbirth operated upon in the Free Hospital for Women in Boston only two developed cancer. After forty, every woman should be examined at least twice a year to see that she is maintaining health. If there be *no* symptoms she goes her way rejoicing. But, if there be any discharge, especially if bloody, or any swelling in the breast or any change in marks upon the skin, the physician who is cancer-conscious will examine until he is thoroughly convinced that all is well or he will place at the service of his patient the most up-to-date treatment that science has devised.

Men need periodic examinations no less than women. Cancer attacks them particularly in the skin and digestive tract. Therefore, any unusual condition should be checked immediately, such as sores about the mouth, lips, tongue, gums or rectum. Any discomfort in the digestive tract, requiring the taking of pills, powders, or liquids for gas, distress, constipation, or diarrhea, calls for a complete examination so that we may be under observation lest, at a future time, a new growth may develop. The x-ray is invaluable in this examination. Whether they are acute or of long standing, hemorrhoids, or piles, require a careful examination of the rectum. In fact, a rectal examination should be included in every general examination, so that some beginning condition is not overlooked. Too often this part of the digestive tract is neglected until it is too late.

No growth is considered a cancer unless it has been examined under the microscope and declared to be such by competent pathologists, that is, physicians trained to examine and recognize body tissues.

Rash statements of so-called "cancer cures" must be challenged. Poor deluded sufferers have based their hopes on such false promises, spent all their savings, only to find their hopes blasted and that operation or x-ray or radium applications must be done anyway. Many have spent their last dollars to pay for treatments by machines advertised by radio and newspapers, when they are already suffering from cancer that can be helped, if taken in time. Often, besides wasting time, the cancer is aggravated by such treatment. Within the last few days I have been told of a patient with cancer of the rectum who was treated by "adjustments of the spine," and of another patient with cancer of the lung treated by impressing upon her that she had no cancer. Death took one and awaits the other.

*There is no serum, no ointment, no machine, no manipulation, no magic formula that will cure cancer.* Only by surgery or x-ray or radium can we cure a "real" cancer.

The American College of Surgeons reported in 1943, 39,318 cases of cancer remaining cured after five or more years. These are proven cases, there is no hearsay about them. They can be verified. They were cured because intelligent patients took their troubles to their physicians early enough to have instituted proper and adequate treatment. It means that instead of consulting the neighbors and the columns of cheap magazines and taking pills and powders and ointments prescribed for "someone who had exactly the same complaint," these intelligent patients had thorough examinations and followed the proper advice.

This report of over 39,000, five-year-and-more cures of cancer means that these patients were seen early and treated early and treated properly. It means that competent physicians and surgeons, skilled in diagnosis and surgical, x-ray and radium therapy, working together, with the proper equipment in office or a Class A hospital, treated these patients in accordance with standard methods as evolved by long years of experience and study.

All instruments and machines are dangerous in unskilled hands, so for the proper treatments

of cancer we cannot too often stress that, in addition to the especially trained personnel, we must have especially equipped hospitals or offices with x-ray machines of adequate voltage, at least 200,000, an adequate supply of radium, and a well-equipped laboratory with a faithful and painstaking corps of workers who know their job, physicians and surgeons of standing and their devoted assistants.

All these means for proper treatment are at hand. It is our duty to present ourselves before it is too late. We should have a complete examination at least once a year, to see if we are maintaining a proper state of health and, if not, why not. Learn the danger signals, so that if any appear between periodic check-ups you can go at once to your physician or clinic for an examination.

If you cannot afford a private physician and want any information on the subject of cancer, consult your local Cancer Committee of the American Cancer Society.

# Current Publications of Women in Medicine

**Thomas, Elaine M.:** Total and fractional blood lipid levels in diseases of childhood. Am. J. Dis. Child. *74:* 563-575, Nov. 1947.

A study of the total and fractional plasma lipid levels in 50 children with various diseases demonstrated in certain instances levels which were abnormal by comparison with those of 24 normal children. The series is too small to permit conclusions as to the constancy of the observed deviations but those for which confirmation is especially indicated are briefly summarized.

Schwartzman, J., **Crusius, Margaret E.,** and Beirne, D. P.: Diabetes mellitus in infants under one year of age. Report of a case and review of the literature. Am. J. Dis. Child. *74:* 587-606, Nov. 1947.

(From the Department of Pediatrics, New York Medical College, Flower and Fifth Avenue Hospitals, and the Metropolitan Hospital, New York.)

A case of an 8 month old girl is reported and fifty-seven cases in infants under one year (reported in the literature to date) are reviewed. The etiologic factors, complications, commonest observations at autopsy, among others, are summarized. Treatment is discussed and advisable procedures in a prophylactic program are suggested.

Welch, S. H., and **Berrey, Ruth:** Histoplasmin sensitivity. Results of studies of children in Alabama. Am. J. Dis. Child. *74:* 607-609, Nov., 1947.

A report of the reactions in histoplasmin and tuberculin tests in 1200 Negro children and 923 white children and results of roentgenograms of the chest are given.

Wiederhold, A. and **Mendez, Antonieta:** La penicilinoterapia en la gonococia infantil. Tratamiento ambulatorio de la gonococia infantil con penicilina inyectable. (Estudio comparativo entre el suministro de la droga por via oral y por via inyectable.) [Penicillin therapy in gonococcic infections in children. Ambulatory treatment of gonococcic infections in children with penicillin injections. (Comparative study of oral administrations and injections)]. Arch. de pediat. del Uruguay *18:* 576-582, Nov. 1947. (English summary).

Twenty-five children treated by oral administration (previous report) and 26 treated by intramuscular injections were studied and the results of treatment were compared. The oral route, though requiring larger dosages, seemed to be more satisfactory for ambulatory treatment.

Schwartz, S. O. and **Armstrong, Berthe E.:** Treatment of iron deficiency (hypochromic anemia). Mississippi Valley M. J. *70:* 2-13, Jan. 1948.

(From the Hektoen Institute for Medical Research of the Cook County Hospital, Chicago.)

Fifty-five iron deficient female patients were studied in an attempt to evaluate the relative therapeutic effects of various iron-containing commercial preparations.

**Travell, Janet,** and Bigelow, N. H.: Role of somatic trigger areas in the patterns of hysteria. Psychosomatic Med. *9:* 353-363, Nov.-Dec. 1947.

(From the Department of Pharmacology, Cornell University Medical College, New York.)

Three cases which demonstrate the role of somatic trigger areas in the patterns of hysteria are presented. Data indicates that each of the patterns of hysteria observed was mediated by afferent impulses from trigger areas located at a specific site within the voluntary muscles and that similarly located trigger areas produced the same pattern of clinical effects whether the trigger mechanisms was activated in one person chiefly by psychogenic stress or in another by some other factor such as physical trauma.

**Eliot, Martha M.:** Child feeding in Europe under the International Children's Emergency Fund. Am. J. Pub. Health *38:* 1-7, Jan. 1948.

Discussion of the creation of the International Children's Emergency Fund, its work, the method of financing, the work of UNRRA on feeding undernourished children, and program for future work. The work of other contributing organizations is also discussed and the opinion of the International Pediatric Congress, Committee on Child Nutrition with respect to needs and the contributions that must come from America, is quoted. The need for changes in American eating habits to conserve food is presented.

Williams, C. L., Jr., Hubbard, J. P., and **Bain, Katherine:** Community health services for children in eight selected States. Am. J. Pub. Health *38:* 75-81, Jan. 1948.

Data have been presented based on 8 selected States showing amount, distribution, and character of certain community health activities for children. The picture shows not only the inadequacy of services in rural compared to urban areas, but also the vast differences between States. The differences appear to be closely related to economic status and to be influenced by State planning.

Peacher, W. G., and **Peacher, Georgiana M.:** Management of speech disorders in a hospital clinic. Dis. Nerv. System *9:* 3-9, Jan. 1948.

The management of organic speech disorders is best accomplished in a general hospital clinic or a closely adjacent building where members of both the medical college and school of speech are associated. (Under such ideal circumstances all diagnostic studies, consultations, medical and surgical treatment are completed prior to specific speech therapy. Re-education is then carried out by a qualified speech pathologist. It is essential that the entire organism be considered during this program as demonstrated by previous army experience.

Weisz, S., and **Creel, Jane N.:** Maintenance treatment in schizophrenia. Dis. Nerv. System *9:* 10-14, Jan. 1948.

The results of maintenance treatment and experiences in carrying out such a program on 25 patients, are reported.

**Lipton, Barbara S.:** Blocking of chemical decerebration by pontile pathology. Case report. J. Nerv. & Ment. Dis. *106:* 537-539, Nov. 1947.

(From the Department of Psychiatry, University of Illinois College of Medicine and Illinois Neuropsychiatric Institute, Chicago.)

A case is reported which is an exception to the results obtained in 58 patients (previous report) who received rapid intravenous administration of NaCN. The later (58 patients) showed typical decerebrate seizures.

**Vaughan, Janet:** Anemia associated with trauma and sepsis. Brit. M. J. *1:* 35-39, Jan. 10, 1948.

(From the Department of Pharmacology, Oxford.)

In this discussion it is suggested that the anemia of trauma and sepsis is dependent upon a disturbance of hemoglobin synthesis affecting chiefly the globin element. This deficiency of globin is part of a wider disturbance of protein metabolism dependent upon the action of breakdown products liberated from the injured tissues or by the need of injured tissues for special aminoacids. Preliminary experimental observations suggest that possibly cobalt may be concerned at some point in this chain of events.

From a practical point of view it is important to treat patients with both trauma and sepsis on a high-protein diet, relieving the anemia when severe with replacement therapy.

**Love, Frances M.** and **Fashena, Gladys J.:** Eosinophilic granuloma of bone and Hand-Schüller-Christian Disease. J. Pediat. *32:* 46-54, Jan. 1948.

(From the Departments of Pediatrics and Pathology of the Southwestern Foundation of Medicine and the Children's Medical Center.)

After a brief review of the recent medical literature and discussion of the relation of the three clincopathologic conditions of eosinophilic granuloma of bone, Letterer-Siwe disease, and Hand-Schüller-Christian disease, a case is reported. The patient presented a transitional form of the disease first manifested as eosinophilic granuloma of bone and four years later as Hand-Schüller-Christian disease. Pathologic findings were strikingly alike in both instances except for anisotropic lipoid in second biopsy specimen.

Daniel, R. D., and **Anderson, Katherine:** Septicemia due to Escherichia coli. J. Pediat. *32:* 81-83, Jan. 1948.

(From the Department of Pediatrics of the Bowman Gray School of Medicine of Wake Forest College, and the Pediatric Service of the North Carolina Baptist Hospital, Winston-Salem.)

Two cases of bacteremia due to Esch. coli are reported: 1. a 5-day old infant in extremis on admission, who died before appropriate therapy could be instituted; 2. a 4-month-old infant who recovered after treatment with 5, 850,000 units of streptomycin. The second child showed no response (clinical or bacteriological) to previous treatment with sulfadiazine for three days.

**Holowach, Jean:** Chronic lymphoid leucemia in children. J. Pediat. *32:* 84-86, Jan. 1948.

(From the Department of Pediatrics, Washington University School of Medicine, and the St. Louis Children's Hospital.)

In a brief review of the literature it was suggested that cases reported were probably acute leukemia with a somewhat longer course than usual. Detailed observations were given for a 3½ year old girl who had had a very large, firm spleen since early infancy and who had a persisting hyperleukocytosis, the majority of the cells being small nature leukocytes.

**Owen, May:** The persistent positive Friedman test in hydatid moles. Texas State J. Med. *43:* 582-585, Jan. 1948.

(From the Department of Pathology, Terrell's Laboratories.)

Four cases are reported in women, ages 21, 25, 26, 27 years, each with hydatid moles and with persistent positive Friedman tests over a period of more than three months following removal of the hydatid moles. These women were subjected to hysterectomy, and tumors involving the wall of the uterus but not communicating with the uterine cavity were removed. The validity of laboratory and clinical findings is discussed.

**Nicholls, Edith E.:** The diagnosis and treatment of migraine. Pennsylvania M. J. *51:* 423-426, Jan. 1948.

(From the Department of Medicine, George F. Geisinger Memorial Hospital, Danville, Pa.)

This is a general discussion of symptoms and treatment. Ergotamine tartrate is recommended as the drug of choice in treatment. Dihydroergotamine (newer preparation) may also be used but dose should be kept as low as possible. Other factors in treatment are also discussed.

**Wills, Lucy:** Pernicious anemia, nutritional macrocytic anemia, and tropical sprue. Blood *3:* 36-56, Jan. 1948.

(From the Department of Pathology, Royal Free Hospital School of Medicine, University of London.)

From a study of the literature and from unpublished work author concludes that these three clinical conditions are three distinct entities possessing a common characteristic in the presence of a panhemopoietic dystrophy characterized by a megaloblastic erythropoiesis and corresponding changes in the myeloid cells and platelets. Pernicious anemia is probably due to a genetic defect; endemic nutritional macrocytic anemia is an unconditioned food deficiency; and tropical sprue is due to a functional disorder of the intestine. Folic acid is active therapeutically in all three diseases, but in all it generally fails to restore completely normal blood levels.

**Koch, Lewis A., Weymuller, C. A.** and **James, Elizabeth:** Reduction of mortality from premature birth. Some practical measures. J.A.M.A. *136:* 217-221, Jan. 24, 1948.

Authors present their concept of certain problems of immaturity and discuss practical measures instituted at the Long Island College Hospital to improve their results in this field. Mortality rates from premature birth can be improved. The improved rates at Long Island College are reviewed.

**Smith, Margaret G.,** Blattner, R. J., **Heys, Florence M.,** and **Miller, A.:** Experiments on the rôle of the chicken mite, Dermanyssus gallinae, and the mosquito in the epidemiology of St. Louis encephalitis. J. Exper. Med. *87:* 119-138, Feb. 1948.

(From the Department of Pathology and the Department of Pediatrics, Washington University School of Medicine, St. Louis.)

The present results concern primarily the question, whether or not mosquitoes feeding on chickens having viremia, as a result of the bite of infected mites, can acquire the virus of St. Louis encephalitis and whether or not mosquitoes thus infected, can transmit the virus to chickens and hamsters.

**Bruch, Hilde:** Psychological aspects of obesity. Psychiatry *10:* 373-381, Nov. 1947.

A concept is presented which treats obesity as the somatic expression of a mal-development in personality maturation. The large physical size represents symbolically the need and desire for strength and security which the fat person lacks in his human relationships. The bodily expansion may be looked upon as a vicarious expression of a thwarted personality development.

**Landau, G. M.,** and **Schorsch, Hildegard, A.:** The adult silent chest. Radiology *50:* 37-42, Jan. 1948.

(From the Department of Roentgenology, Cook County Hospital, Chicago.)

Five cases are reported which are sufficiently revealing to stress the necessity of early diagnosis and treatment of intrathorax lesions. Radiography is the method of choice in routine examination.

**Liston, W. B.** and **Chisholm, Fanny B.:** Leucorrhoea in pregnancy. A further study with special reference to the hydrogen ion concentration and lactic acid content of the vagina. J. Obst. & Gynaec. Brit. Emp. *54:* 592-606, Oct. 1947.

(From the Laboratory of the Royal College of Physicians, Edinburgh; and the Simpson Memorial Maternity Pavilion, Royal Infirmary, Edinburgh.)

A large number of specimens of vaginal fluid from pregnant women suffering mostly from leukorrhea were examined with respect to pH and lactic acid concentration. The results were compared with the vaginal fluid in the normal healthy women. The various types of cases studied are discussed.

**Lehrer, Sylvia:** Note of a case of cerebral haemorrhage occurring early in pregnancy. J. Obst. & Gynaec. Brit. Emp. *54:* 657-658, Oct. 1947.

(From St. Alfege's Hospital, London County Council.)

A fatal case of cerebral hemorrhage in a 21 year old patient, 5 months pregnant, is described. No cause of the hemorrhage was found.

**Metcalfe, E. Marion:** Bilateral ovarian dermoids in a girl of twelve. J. Obst. & Gynaec. Brit. Emp. *54:* 657-658, Oct. 1947.

(From Horton Emergency Hospital.)

Case report.

**McIlrath, Muriel B.,** and Hellestrand, A. L.: Studies in the biology of the cervix and its relation to puerperal infections. J. Obst. & Gynaec. Brit. Emp. *54:* 746-777, Dec. 1947.

(From the Royal Alfred Hospital, Sydney.)

The history and present knowledge of puerperal infection are reviewed. Seventy-seven cases were studied in detail throughout pregnancy, in the puerperium and postpartum. Conclusions with regard to treatment and prevention are given.

**Robinson, Margaret:** Cramps in pregnancy. J. Obst. & Gynaec. Brit. Emp. *54:* 826-829, Dec. 1947.

(From Medical Research Council at St. Thomas' Hospital, London.)

Treatment with calcium lactate gives no better results than treatment with saccharine tablets. In 47 per cent of untreated cases, the cramps ceased before the end of pregnancy. Of 198 cases there were only 18 relapses which occurred during hot weather. Treatment with sodium chloride cures a large percentage of cases and has no ill effects on either the mother or infant. Cure by increased salt-intake may indicate adrenal deficiency or that an increase in salt-intake is necessary in pregnancy for greater ovarian activity. The cramps of pregnancy are apparently similar to the heat cramps in industry.

# BOOK REVIEWS

(EDITOR'S NOTE:—*These reviews represent the individual opinions of the reviewers and not necessarily those of the members of the Editorial Board of this* JOURNAL.)

**SYNOPSIS OF OBSTETRICS. By Jennings C. Litzenberg, B.Sc., M.D., F.A.C.S., Professor emeritus of Obstetrics and Gynecology, University of Minnesota Medical School, Minneapolis. 3d edition. 416 pp., including index. With 157 illustrations, 5 in color. Price, $5.50. St. Louis, The C. V. Mosby Company, 1947.**

The author presents with clarity and impartiality the various conditions met within obstetrics, without including controversial matter which may be confusing to the medical student.

While the book is uniformly good, certain sections are outstanding; namely, those on puerperal infection, syphilis, diabetes, and cardiac disease during pregnancy. The chapter on RH factor is a concise summary of the immense amount of literature on that subject. Its clinical significance is sufficiently stressed and the confusing serological subgroups are cleverly omitted. The various characteristics of contracted pelvis are fully discussed along the lines of Caldwell and Moley's classification. Due attention is given to clinical judgment of cephalo-pelvic disproportion aided by x-ray and other methods of investigation. Outlet contraction is not as rare as was formerly supposed.

In addition, the book contains many valuable illustrations and should prove extremely helpful to both medical students and practitioners as a means of quick reference.

—Ada S. H. Wong, M.D.

**THE PHARMACOPOEIA OF THE UNITED STATES OF AMERICA (The United States Pharmacopoeia). Thirteenth Revision (U.S.P. XIII). By authority of the United States Pharmacopoeial Convention meeting at Washington, D. C., May 14 and 15, 1940. Prepared by the Committee of Revision and published by the Board of Trustees. Official from April 1, 1947. Fabrikoid. Price, $8.00. (Outside of the United States, $8.50.) Pp. 957. Mack Publishing Company, Easton, Pennsylvania, 1947.**

This is the thirteenth revision of the Pharmacopoeia and has been official since April 1, 1947. There have been a number of products eliminated and new ones added, among them the new digitalis glucosides and the penicillin preparations (of which seven types are listed). A number of therapeutic agents of more recent development are missing, such as streptomycin, folic acid, and anti-histamine preparations. The preparations are listed alphabetically, according to their English titles, so that there is ready reference to them. This is a carefully compiled standard textbook.

—Ada Chree Reid, M.D.

**PRACTICAL CLINICAL PSYCHIATRY. By Edward A. Strecker, M.A., ScD., LL.D., M.D., Professor of Psychiatry, School of Medicine, University of Pennsylvania; Franklin G. Ebaugh, M.D., Professor of Psychiatry, University of Colorado School of Medicine; and Jack R. Ewalt, M.D., Professor of Neuro-Psychiatry, University of Texas Medical Branch. With section on Psychopathologic Diseases of Childhood by Leo Kanner, M.D., 6th edition. 476 pp., with 35 illustrations. Price, $5.00. The Blakiston Company, Philadelphia, 1947.**

This is a compact book dealing with methods of examination and diagnosis of common psychiatric disorders. It is primarily designed for practicing psychiatrists. The first chapter deals with personality development and function. The body of the book deals mainly with the classification and description of different types of behavior disturbances and mental disease. The last part is a brief review of psychopathologic problems of childhood. The book should be of value primarily for diagnosis since the description and classification of disorders are given in detail and treatment is either merely indicated or mentioned only briefly.

—Leoni N. Claman, M.D.

**A PRIMER OF CARDIOLOGY. By George E. Burch, M.D., F.A.C.P., Associate Professor of Medicine, Tulane University School of Medicine; Senior Visiting Physician, Charity Hospital; Consultant in Cardiovascular Diseases, Ochsner Clinic; Visiting Physician, Touro Infirmary, New Orleans; and Paul Reaser, M.D., Instructor in Medicine, Tulane University School of Medicine; Assistant Visiting Physician, Charity Hospital, New Orleans. 272 pp. with 203 illustrations. Price $4.50. Lea and Febiger, Philadelphia, 1947.**

The book is recommended as a practical and quick reference work for students in cardiology; but as the authors admit it is inadequate for thorough cardiac study. Some of the pen and ink diagrams are not clear. In the section on congenital heart disease dextroposition of the aorta is described incorrectly as if it were right aortic arch, which latter is not mentioned as a separate clinical entity. The Eisenmenger complex is not clearly described, while the advice given to the victims of coarctation of the aorta "to limit activity" is very conservative with the brilliant results we now find with surgery. The chapter on theories and findings in mechanism of the heart in failure with edema is interesting and stimulating.

—Gertrude H. B. Nicolson, M.D.

**ESSENTIALS OF PHARMACOLOGY. By Frances K. Oldham, M.Sc., Ph.D., Research Associate in Pharmacology, University of Chicago; F. E. Kelsey, Ph.D., Associate Professor of Pharmacology; E. M. K. Geiling, Ph.D., M.D.; Frank P. Hixon, Distinguished Service Professor and Chairman of the Department of Pharmacology, University of Chicago. Pp. 440. Price $5.00. J. B. Lippincott Company, Philadelphia. 1947.**

This treatise on Pharmacology is well organized and clearly written. Drugs are grouped for discussion according to their chief actions or uses. The chemical structural formula is given for the more important agents, and the salient features of their actions are discussed. At the end of each chapter, there is an up-to-date bibliography and a convenient list of preparations of drugs available with their official or non-official status and accepted dosage.

The book is best suited for the elementary courses in pharmacology but it makes a useful synopsis for the medical student and practitioner.

—Lloyd D. Seager, M.D.

# News of Medical Women

## DR MARTIN HONORED

Dr. Elisabeth Martin of Atlanta, Georgia, was deservedly honored by her fellow citizens in January when she was selected as Atlanta's Woman of the Year in the Professions. This recognition was given her chiefly because of her unselfiish and untiring work at the Florence Crittenton Home for unmarried mothers, where she has been attending physician and medical director since 1942, shortly after she began practice in her home town. During those five years she delivered 300 babies at the Home, and has raised it from a poorly equipped place to one with facilities for every obstetrical procedure except major surgery and blood transfusions. She has also established prenatal clinics there.

A graduate of the Medical College of Virginia in 1941, Dr. Martin had a year's internship at Rex Hospital, Raleigh, North Carolina, and another year as resident in obstetrics and gynecology in Piedmont Hospital, Atlanta. In addition to a heavy private practice and her work at the Home, she is now medical examiner at the Young Women's Christian Association and a member of the teaching staff of Emory University School of Medicine and of the staffs of Piedmont, Crawford W. Long, and Grady Hospitals. She is also Chairman of the Committee on the History of Medicine, American Medical Women's Association, and is compiling a history of women physicians in Georgia, because, as she says, "the pioneers were the ones who had it tough." She is also quoted as saying that "Medicine is a wonderful field for women. I could not ask to have been accepted more graciously. I have not seen any evidence of prejudice against women doctors."

This award after only five years' work is evidence that at least there is no prejudice against Dr. Martin herself. The Association is proud of her.

## OBITUARIES

### ANNA M. GOVE, M.D.

Dr. Anna M. Gove, head physician at Woman's College of the University of North Carolina from 1893 until 1937, third woman to practice medicine in North Carolina, and beloved and respected member of the College community for fifty-five years, died at St. Leo's Hospital, Greensboro, North Carolina, on January 28, 1948.

Born in 1868, daughter of a -New Hampshire doctor, she attended successively a private school, St. Johnsbury Academy in Vermont, and the Massachusetts Institute of Technology. She then entered the Woman's Medical College of New York Infirmary for Women and Children, and after graduation in 1892 did a year's work in the hospital of the New York Infants' Asylum. In 1893 Dr. Gove went to Greensboro as physician at Woman's College of the University of North Carolina, then at the beginning of its second year of operation and known as the State Normal and Industrial College. She was licensed in 1894 and in 1896 joined the State Medical Society. She remained as resident physician, professor of hygiene, and director of the department of health of the College until her retirement in 1937, and during her leave of absence continued her medical studies both at home and abroad. In 1918 she went to France with the American Red Cross in charge of overseas dispensaries for refugee children, serving with the Smith College Relief Unit at Grecourt, Somme. She traveled widely, while on leave of absence during 1926-27, visiting China, Japan, Korea, French Indo-China, and India.

Dr. Gove served as an officer of the American Student Health Association and for many years was director for the Carolinas of the American Medical Women's Association. She was a member also of the County and State Medical Societies and of the American Medical Association.

Even after retirement in 1937, following forty-four years of service, Dr. Gove continued to serve the College as part time physician up to the time of her final illness.

On May 30, 1936, the College infirmary, by action of the Board of Trustees, was named the Anna M. Gove Infirmary. As the fire of her personality goes out, the Woman's College, her community, her State, and her friends mourn the end of an era.

—Irma Henderson Smathers, M.D.

### MARY LOUISE JENNINGS, M.D.

**Dr. Mary Louise Jennings** of Geneva, New York, a graduate of the University of Buffalo School of Medicine, in 1899, died at her home on January 17, 1948, aged 79 years. Dr. Jennings, said to have been the first woman to practice medicine in Geneva, retired from active work some time ago.

### JANE LINCOLN GREELEY, M.D.

**Dr. Jane Lincoln Greeley** of Jamestown, New York, a graduate fo the Woman's Medical College of the New York Infirmary for Women and Children in 1897, died at her home on January 22, 1948. Dr. Greeley was born in Methuen, Massachusetts, on November 8, 1864, her father being the minister of the Congregational Church in the town. She graduated from Abbott Academy, Andover, and after teaching at the Academy for seven years, began the study of medicine in New York. She was graduated as president of her class and spent the succeeding year as an intern at the Infirmary. In November 1898, she took up the practice of medicine in Jamestown, during the days when a doctor's calls were made with a horse and buggy. In 1941, because of failing health, she retired from active work, having spent forty-four years in continuous practice in Jamestown. Her interests were not limited to medicine, for she was an accomplished pianist, a member of the Mozart and Fortnightly Clubs, a charter member of the Zonta Club and of the Community Chest, and an influential and highly respected citizen. She was also a member of the American Medical Association, of the Jamestown, Chautauqua County, and New York State Medical Societies, and of the American Medical Women's Association.

## FROM DAY TO DAY

*(The Chronicle of an Editor)*

A visit today with **Dr. Ada Middelhoven** who returns to Holland tomorrow, sailing on the Nieuw Amsterdam. She arrived in New York November 6, 1947, on the maiden trip of this vessel, and has spent the intervening months in observing pediatric clinics in Boston (chiefly at the Children's Hospital), at the Mayo Clinic, in Chicago (at the University of Illinois and at Northwestern University), and in Cincinnati (with Dr. Welch and Dr. Dodd). She spent Christmas in Washington, D. C.—then to Johns Hopkins Hospital with Dr. Helen Taussig, and finally to New York. Here she has visited at Babies Hospital and the Children's Service at Bellevue, where she was especially interested in Dr. Edith Lincoln's results with streptomycin and promizole in the treatment of tuberculous meningitis. Dr. Middelhoven is Deputy Chief of the Medical Department of the Emma Children's Hospital, Amsterdam.

* * *

The mail brings a pamphlet entitled **"Women, their Professional Status,"** a study of the professional position of women in the years immediately preceding World War II, summarizing the material contained in "The Law and Women's Work" by Madam Thibert. This pamphlet is issued by the British Federation of Business and Professional Women. It is very interesting reading, although the section on women in medicine and allied services seems somewhat sketchy.

* * *

In the January 10 Lancet is published the list of New Year honors (**Great Britain**) which contains the names of a number of women physicians:

C.B.E. (Civil) Isabel Hutton, M.D.—Lately director of welfare, Indian Red Cross, and St. John War Organization.

O.B.E. (Civil) **Miss Harriet E. Acheson, M.D.,** Vice-Principal and professor of Obstetrics and Gynecology, Lady Hardinge Medical College, New Delhi; **Miss Margaret Stewart Munday, M.B.,** lately professor of physiology, Lady Hardinge Medical College, New Delhi; **Miss Victoria Mary Crosse, M.D.,** Deputy Senior assistant M.O.H., Birmingham.

M.B.E. (Civil) **Miss Margaret Kerr Menzies Alexander, M.B.,** Medical Superintendent, Christian Rainy Hospital, Todcarpet, Madras; **Miss Margaret Shephert, M.B., F.R.C.S.,** Madras (for medical services); **Mrs. Una Frances Marie Martyn, M.B.,** Superintendent, Lady Lyall and Dufferin Hospital, Agra.

Bar to Kaesor-i-Hind Gold Medal. **Miss Jean Murrary Orkney, M.B.,** Chief Medical Officer, Women's Medical Services.

Kaisor-i-Hind Gold Medal. **Miss Jane Grout, M.B.,** Medical Officer, Church of Scotland, Seoni, Central Provinces, and Berar.

* * *

At a dinner meeting of a local B. & P. W. Club we heard Mme. Laurentz recently returned from Greece discuss present political conditions there, and we were surprised to learn during the following discussion that two friends present at this dinner had been associated with the American Women's Hospitals in Greece twenty years previous! So to luncheon a few days later with these two and Dr. Lovejoy and very interesting to hear the three recounting adventures and recalling incidents of those years following World War I—the next day's mail brought the following note from one of them—

"It was a real pleasure to meet Dr. Lovejoy again. Looking back on my association with the American Women's Hospitals in Greece during the years 1926 to 1930, I regard it as the high-light experience of my life. It was the period of improvement and rehabilitation for the displaced Greeks from Anatolia, and the City of Athens was beginning to grow up and to acquire a "new look."

The great work of medical service, health education, and social welfare was being carried on by competent and interested people whose opportunities were possible only through the valiant and constant efforts of the American Women's Hospitals in America, whose capable Executive Secretary, Dr. Esther Pohl Lovejoy, has for these many years carried on this work in conjunction with the Board of Directors.

Recalling my pleasant associations in Greece, I remember the names of some of the women making great contributions unselfishly and unstintingly, such as Dr. Jane E. Robbins, Dr. Angenette Parry, Dr. Elfie R. Graff, Baroness Nicholas Cherkasoff, Mrs. Mabel Power, Miss Isabel Norkewicz, Miss Emily Petty, Miss Adah Butts, Miss Emily Wilms, and Dr. Ruth Parmalee. Their stories are dramatic, tense, and inspiring and their accomplishments are a monument to women doctors, nurses, and social workers. To many in Greece, they are magic names for they have meant life and hope.

I believe that peace is possible only by education and certainly a large contribution to this has been and is being made by the American Women's Hospitals. An outstanding example of this continuing work is the Nurses' Training School in Kokkinia. It's story is a book in itself. It has a very special meaning to me because nineteen years ago, my son was born there. Exchange of ideas and the friendly neighborliness of peoples of different nations are in themselves educational and therefore an aid to the attainment of peace.

Greece again is in the depths of despair, want and turmoil. It seems that educational processes there are too slow and one might easily become discouraged; but the patient and persistent courage of American women doctors can be relied upon, as in the past, to keep on regardless of any discouragements.

It looks like a tiny effort in solving such a great problem. But it is good and right and who can know what greater good and righteousness may come from it.

RUTH HILTON CLELAND

* * *

We read in the J.A.M.A. an account of the opening of a "demonstration" mental hygiene clinic on the campus of the University of Maryland, to be headed by **Dr. Mabel L. Ross,** psychiatrist. This is said to be the first clinic of the kind, made possible by the National Health Act in 1947, in the $7,500,000 program of the U. S. Public Health Service to combat mental disease by preventive medicine. It is reported that the clinic will turn this community into a laboratory for the control and study of mental diseases from a community standpoint.

* * *

Among grants for tuberculosis research that have been voted by the Committee on Medical Research of the National Tuberculosis Association are those to **Dr. Edith M. Lincoln** of Bellevue Hospital, New York, for studies on the course of tuberculosis in children, and to **Dr. Florence B. Seibeit** of the Henry Phipps Institute, Philadelphia, who is investigating the chemistry of tuberculosis and chemical changes in the blood in tuberculosis.

* * *

In letters to the Editor of the J.A.M.A. (Feb. 21) we were interested to read one from Dr. Colvin in regard to an International Medical School—especially interesting to us in view of the letter from **Dr. Lucia Bedarida** (our correspondent in Morocco)—urging the establishment of an International Medical School in the International zone of Tangier (see p. 105, March 1948 issue).

* * *

Preliminary reports regarding the use of Bacitracin in surgical infections are favorable and it is now becoming available for special trials in nine cities, according to its discoverers, Dr. F. L. Meleney and **Dr. Balbina A. Johnson,** of Columbia University College of Physicians and Surgeons.

An announcement has come of the American Industrial Hygiene Association meeting in Boston, March 30 to April 2. On the program is **Dr. Alice Hamilton** who will give the Cummings Memorial Lecture—her subject, "Forty Years in the Poisonous Trades."

* * *

The mail brings a progress report of the Study of Rheumatic Fever and Rheumatic Heart Disease in the lower east side district of New York; this study is being directed by **Dr. Elvira De Liee** for the United States Public Health Service.

* * *

A visit from **Dr. Perihan Cambel** of Ankara, general secretary of the Turkish Cancer Research Association, on her way to St. Louis where she will work with Dr. E. V. Cowdry in cancer research. She brings for the Journal a biographical article about two women physicians of Turkey who became members of Parliament.

* * *

Exciting news in today's mail. **Professor A. Ch. Ruys** of Holland, President of the Medical Women's International Association, has been invited to give a paper at the Fourth International Congresses on Tropical Medicine and Malaria which meets in Washington, May 10 to 18, 1948. She will arrive in New York, May 6, then to Washington, visit Baltimore on the way back, and leave New York for Holland on May 26.

* * *

From the World Health Organization (Interim Commission) we have received the names of the following Chinese women doctors who are in the States on W. H. O. fellowships: **Dr. Jeannette Lin,** who is now in Washington, (c/o Dr. Henry R. O'Brien, Chief, Officer of International Health Relations, U. S. Public Health Service, Washington 25; **Dr. Marion Yang,** who is working at Johns Hopkins Hospital, Baltimore, Maryland; **Dr. H. H. Huang,** in New York (c/o Calvary House, 61 Gramercy Park, New York 10); and **Dr. Ai Feng Yu,** at the Lying-In Hospital, 5841 Maryland Avenue, Chicago, Illinois.

Washington, New York, Baltimore, and Chicago Branches, please note!

* * *

Women Physicians in the news of the month are:

**Dr. Eva Landsberg,** who has been appointed chief of the Division for Physically Handicapped Children in the New York City Department of Health.

**Dr. Ruth Raattama,** who has been appointed Director of the Maternal and Child Health Division of the Denver, Colorado, Health Department. Recently with the Idaho State Health Department, she has just completed a Fellowship at the Mayo Clinic.

**Dr. Edith L. Potter,** Chicago, who delivered the second series of the annual Obstetric and Gynecological Lectureship on "Immunization to the Rh Factor" and "Etiology of Maldevelopment of the Human Fetus" at the University of Utah, Salt Lake City, February 16 and 17.

**Dr. S. Elizabeth McFetridge,** Shepherdstown, West Virginia, who has been elected president of the Eastern Panhandle Medical Society, the first woman to be named president of a component society of the West Virginia State Medical Association. In addition to her specialty of anesthesiology, Dr. McFetridge is engaged in general practice. She was recently named chairman of the association's Committee on Maternal Welfare.

**Dr. Harriet L. Hardy,** who is on leave of absence from the Massachusetts Division of Occupational Hygiene for 1 year to be with the Atomic Energy Commission at Los Alamos, New Mexico. During this time, it is expected that she will gain valuable experience in the medical control of harmful effects on workers exposed to radiation hazards.

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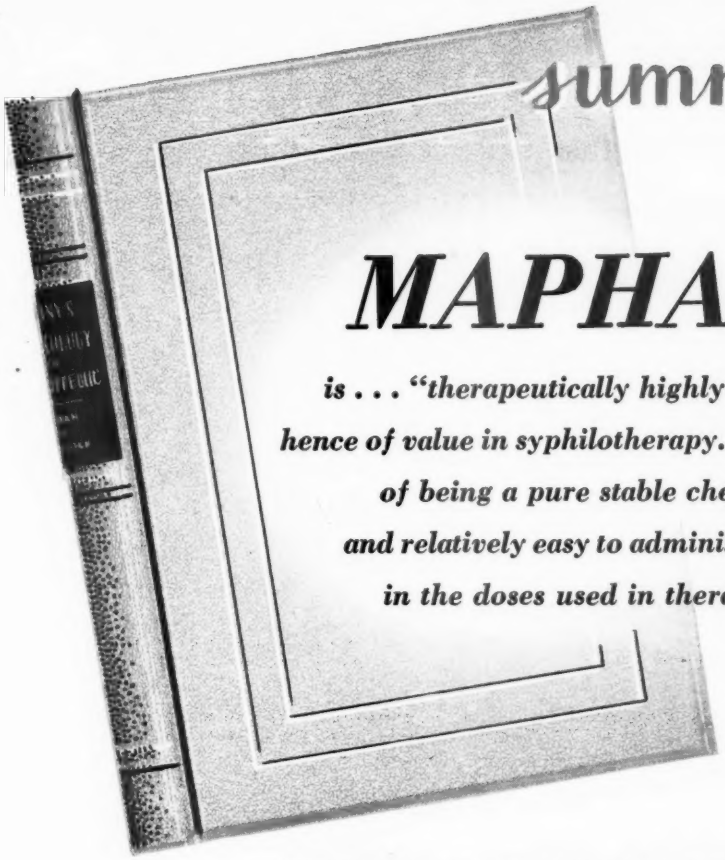

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*Cushny, A. R.: Pharmacology and Therapeutics, 13th Ed., Lea & Febiger, Philadelphia, 1947, p. 183.

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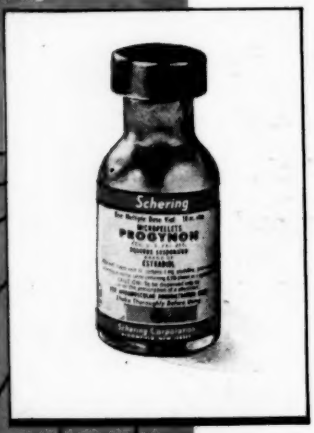


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